TRADE PUBLICATION

Brick & Clay RECORD

NOVEMBER, 1959

60's Progress thru Unity

Page 61

HATS OFF to the SCPI of...

'60...'70...'80...'90

and to the 35 Charter Members

Service! Inspiration! Guidance! Counsel! Promotion! Apprentice Training! Engineering! Product Research! All have been provided in extra measure by the united efforts of the 35 clay products manufacturers who 25 years ago organized the Structural Clay Products Institute.

Since 1934, their ranks and resources have grown as other alert producers "joined up." And on this Silver Anniversary, it's a safe bet that SCPI forces will be heading the parade of all those who are dedicated to the advancement of clay products when the Golden Anniversary arrives in 1984.

So again, hats off, especially to the 35 charter members listed below, as well as to the other manufacturers now backing SCPI for the big push ahead.

COMPANY	PRESIDENT
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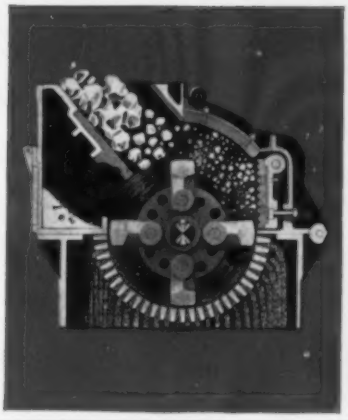
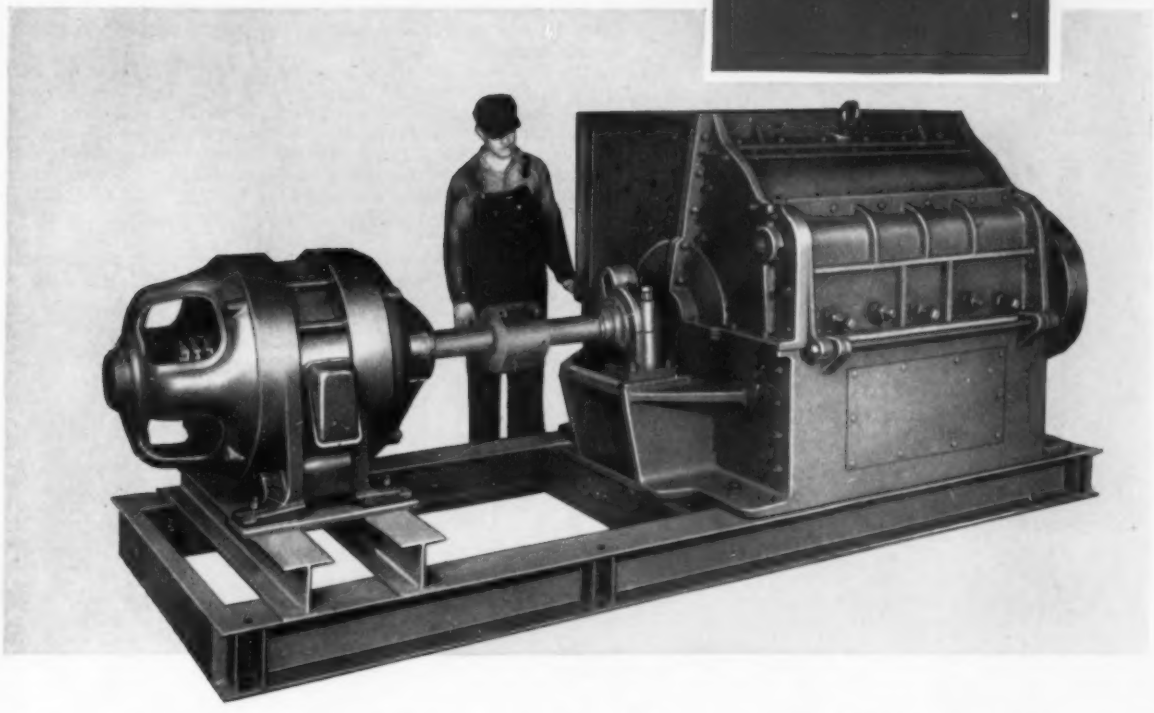
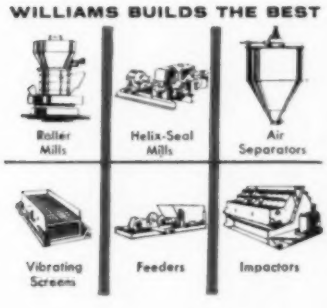
CANTON 2, OHIO

Complete size reduction... from start to finished product... in a single Williams Hammer Mill





Cut costs as much as 50% on production... up to 75% on equipment



In all normal crushing operations, a Williams heavy duty hammer mill can take most material and, *in a single pass*, reduce it to finished size! Production economies alone, in labor, power, maintenance, as well as stepped up output of better quality and more uniform products, will *cut costs up to 50%*.

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LEADING CLAY JOURNAL OF THE WORLD

Brick & Clay
RECORD

A CAHNERS PUBLICATION
November, 1959 Vol. 135, No. 5

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The November Brick & Clay Record marks a milestone in our history. This is the largest monthly issue of Brick & Clay Record ever published. It is with a great sense of pride but also with a feeling of deep humility that we wish to thank everyone who helped make this milestone possible. Never content to rest on our laurels, we at Brick & Clay Record are eager and determined to do our part in growing with the industry and servicing our readers in the sensational sixties.

THE MAGAZINE OF

Brick—Drain Tile—Structural Tile—

Clay Aggregate—Terra Cotta—Roofing Tile

Refractories—Clay Pipe

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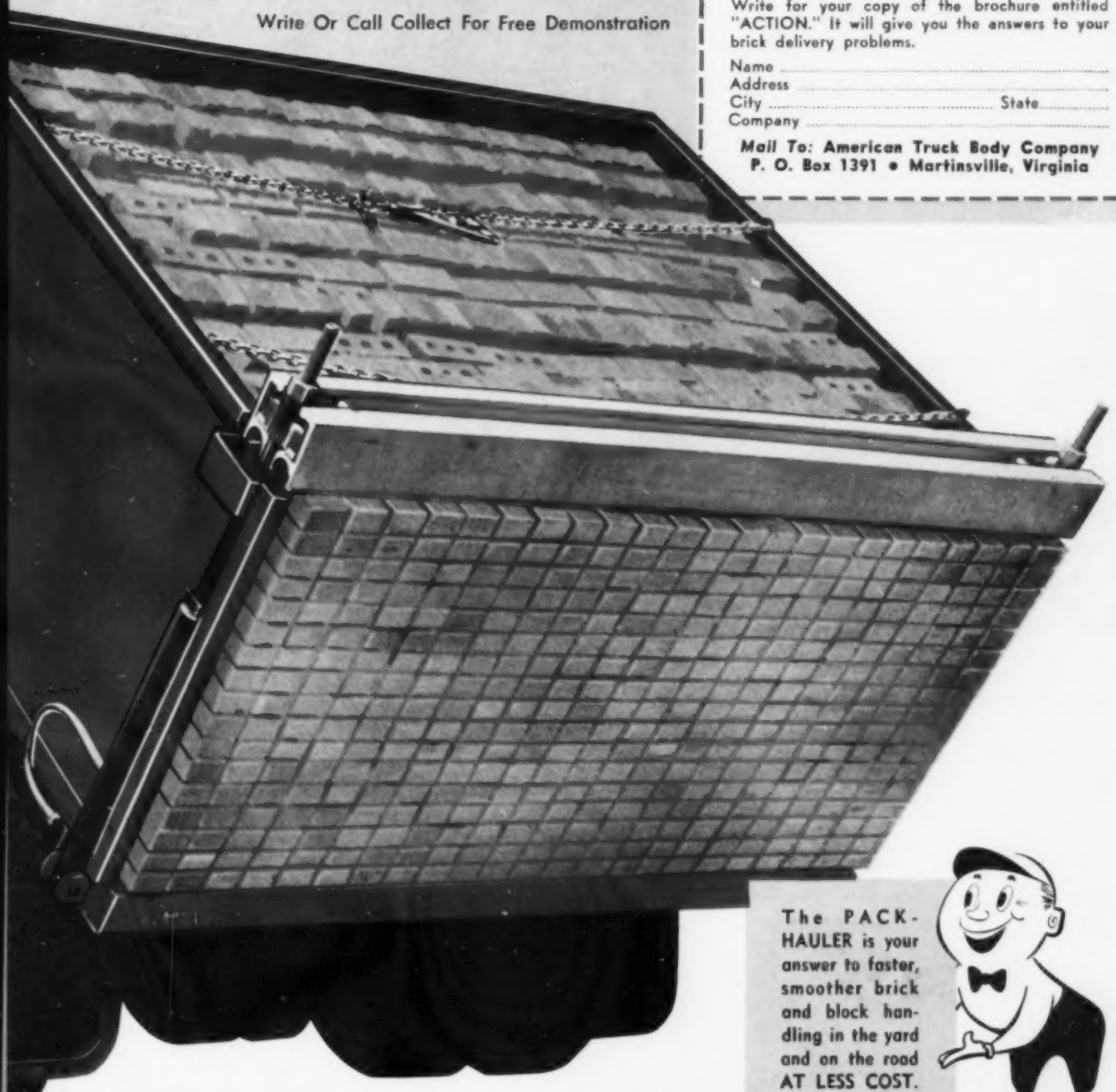

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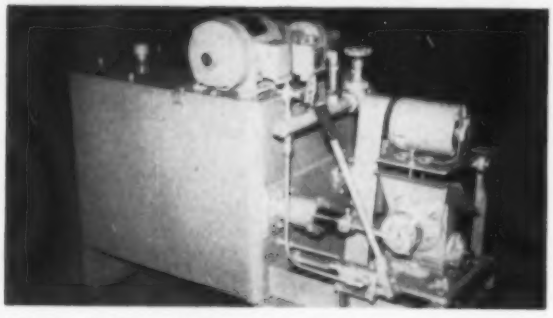
Efficient screening of dry or damp materials is assured. Electric vibrators give proper cloth vibration and adaptable electric cloth heating unit will serve steel and stainless steel cloths. Applications in clay, limestone etc., 4 through 40 mesh.
Heating kits and vibrating kits are also available for existing screen installations.

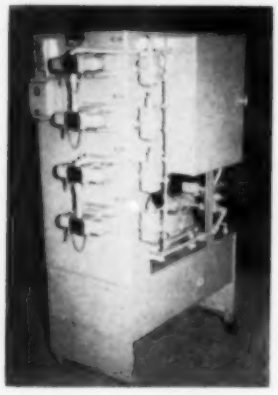
Twin 5' x 6' double deck unit is shown in illustration at left.



Kiln Propeller Hydraulic Power Unit illustrated.

HYDRAULIC KILN PROPELLERS

Star hydraulic kiln propellers are custom designed for individual kiln installations. The Star hydraulic power unit combines the advantages of reciprocating and rotary pump units to make available an accurate and efficient car moving cycle. Manual or solenoid operated valving can be furnished for single acting and double acting hydraulic cylinder arrangements. Safetys, interlocks, and signals can be incorporated to suit customer's requirements.



HYDRAULIC DRIER PROPELLERS

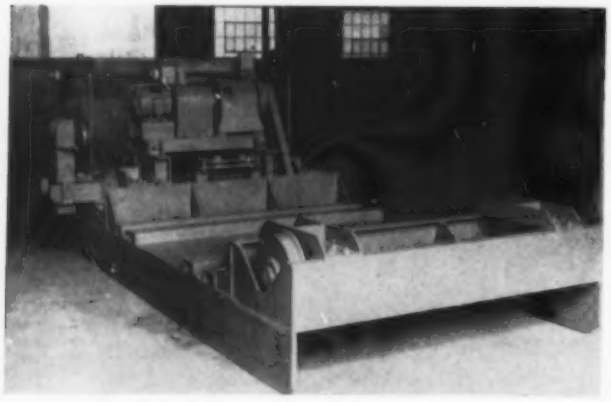
There is a Star hydraulic propeller system available for any tunnel drier installation. Single or multiple tunnels can be arranged using manual or semi-automatic valving systems. Hydraulic power units are equipped with control panels prewired and piped and mounted integral with power unit or located remotely.

Typical prewired and piped power unit and control panel are shown in illustration at left.

Setting Track or Return Track Car Propellers

The Star hydraulically operated car mover systems are designed for use in any combination of operations that may be required for a particular plant layout.
Propeller units with transfer pull off features, indexed push, automatic car spacing, transfer push on and drier or preheater charging are readily available for any specific installation. Prewired and piped control panels mounted on power unit or arranged separately are provided. Fabricated steel forms designed to facilitate installation can be incorporated into the design.
The sound engineering that is put into the Star propeller units provide for long, trouble free service.

Illustration above shows typical hydraulic power unit with prewired and piped hydraulic & electrical components.



TRANSFER CARS

Star transfer cars are designed and built for hauling kiln cars weighing up to 75,000#. They are available in pitless or pit type models. The propel drive can be arranged for fluid coupling, hydraulic motor or D.C. motor components. For ease of kiln car handling, Star transfers can be furnished with winch and sheave assemblies, telescoping hydraulic car propellers or side cars.

Pitless transfer car with winch, folding outrigger sheave and fluid drive propel arrangement shown.

For further details, specific recommendations, quotations or discussion of equipment requirements, write or call—Star Foundry & Machine Company, New Lexington, Ohio — Phones FI 2-2377 & FI 2-3129.

• Use High Quality Equipment To Make A High Quality Product . .

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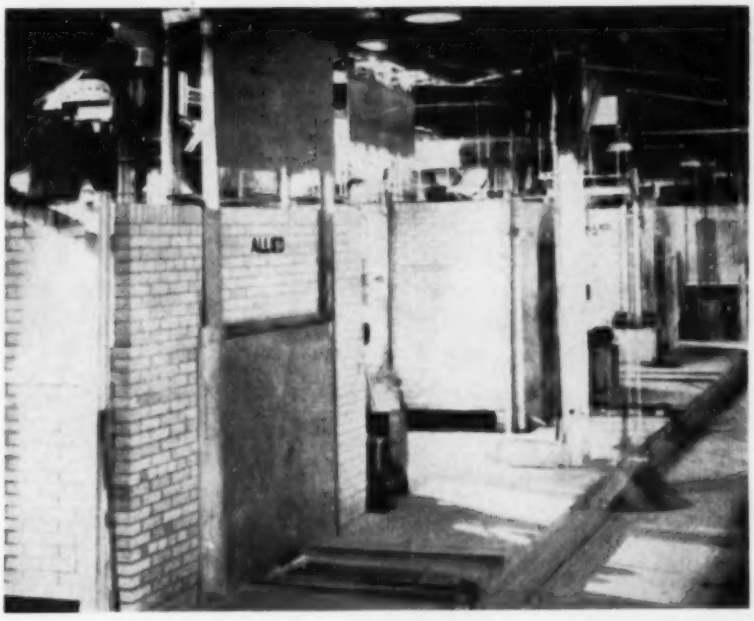

It takes high quality, precision equipment to manufacture quality refractories to exact specifications.

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REDUCES CLAY HANDLING COSTS FOR REFRACTORY IN MEXICO

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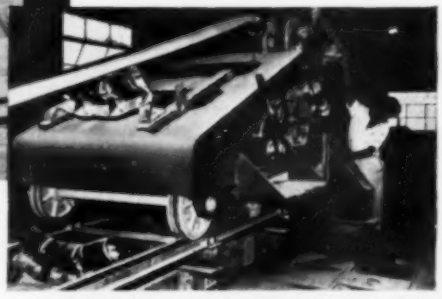
Twin 18-inch belt conveyors on horizontal run over storage bins handle 100 tons per hour at speed of 250 feet per minute.



Swivel spout on the discharge chute of this traveling belt tripper directs flow of material to desired bin opening.

- Bucket Elevators
- Belt Conveyors
- ZIPPER Conveyor-Elevators
- REDLER Conveyor-Elevators
- Circular Bin Discharger
- TELLEVEL Bin Level Controls

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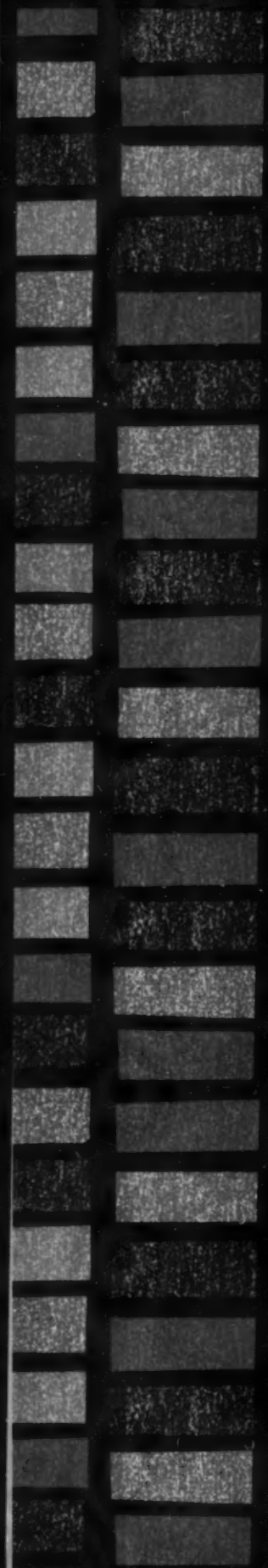

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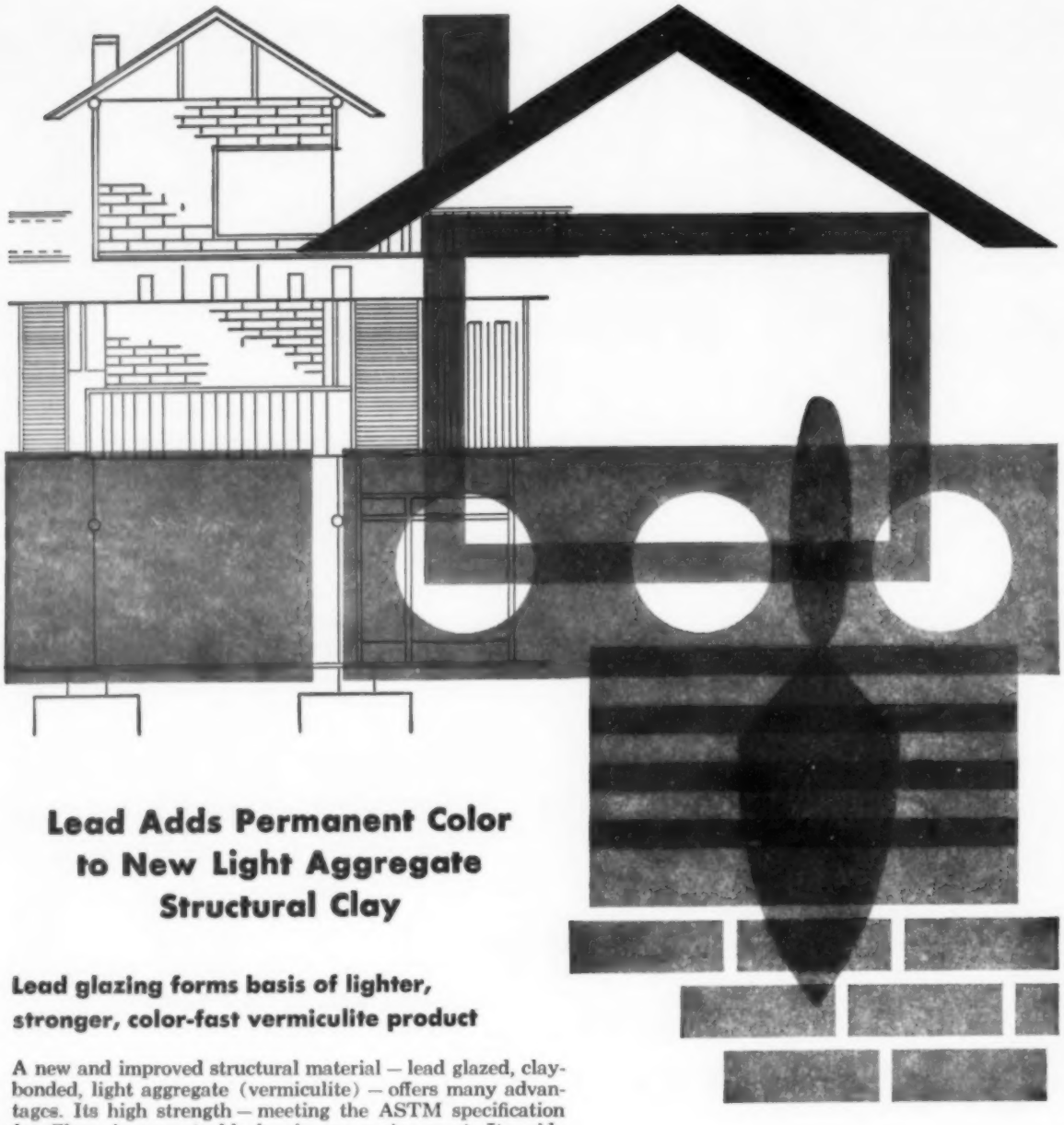

Lead Adds Permanent Color to New Light Aggregate Structural Clay

Lead glazing forms basis of lighter, stronger, color-fast vermiculite product

A new and improved structural material — lead glazed, clay-bonded, light aggregate (vermiculite) — offers many advantages. Its high strength — meeting the ASTM specification for Class A concrete block — is one major asset. Its wide range of permanent color is another. Thus it provides the construction industry with a new structural clay product for both interior and exterior use with integral color styling and a smooth, self-cleaning surface.

In developing the glaze, the Zonolite Corporation tested a variety of glass compositions. Of all these only lead glazes gave consistently good results in the temperature range up to 2000°F. Lead is important in these glazes because it gives a controlled viscosity range, allowing reaction of the glaze with the body but not allowing excessive soaking of the glaze into the porous body.

This new product is another example of how the structural clay products industry has relied upon lead glazes . . . on brick, tile, and other structural clay materials to provide more useful, beautiful and marketable products. For more information, write to: Lead Industries Association, 60 East 42nd Street, New York 17, N.Y.

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1064

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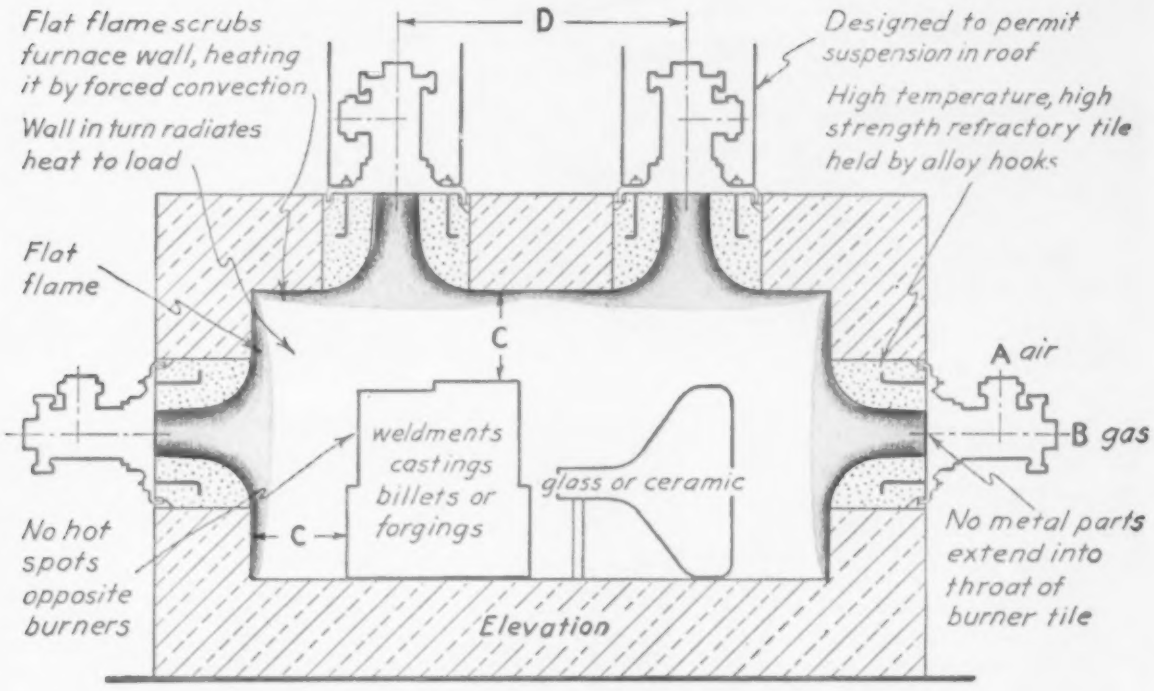
North American FLAT FLAME BURNERS

More Production — No Hot Spots


Flat flame scrubs furnace wall, heating it by forced convection
Wall in turn radiates heat to load
Flat flame
No hot spots opposite burners
D
C
C
weldments castings billets or forgings
glass or ceramic
Designed to permit suspension in roof
High temperature, high strength refractory tile held by alloy hooks
A air
B gas
No metal parts extend into throat of burner tile
Elevation

This Sketch shows how your North American Combustion Engineer might suggest using Flat Flame Burners to get the fullest use from your furnace — by putting a bigger pay load closer to walls and roof without flame impingement. (Figures for typical applications are listed in the table below.)

Each flame actually turns the corner of its specially shaped tile to give a temperature uniformity never before possible with so few burners. These nozzle-mix burners have an exceptionally wide turndown range and can be operated on correct air-fuel ratio or with excess air.

BURNER	A, Air Pipe Size	B, Gas Pipe Size	C, Suggested Min. Wall to Load	D, Suggested ℄ to ℄		Specifications
				Minimum	Maximum	
4832-2 & 4836-2	1¼"	1"	9"	13½"	30"	
4832-3 & 4836-3	1½"	1"	9"	16"	36"	Series 4832 has a
4832-4 & 4836-4	2"	1¼"	9"	18"	48"	13½" square tile.
4832-5 & 4836-5	2½"	1½"	11"	24"	62"	Series 4836 has a
4832-6 & 4836-6	3"	2"	12"	27"	77"	24" square tile.
4832-7 & 4836-7	4"	2½"	14"	33"	100"	

For engineering information, call your nearby North American Combustion Engineer or write for bulletins

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The North American Mfg. Co.
Cleveland 5, Ohio

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SUPERLITE Unloaders Cut.

Richland Shale Products Co., Columbia, S. C.

Fast-Effortless-Economical SUPERLITE Unloading

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Denver Brick & Pipe Co., Denver, Colo.

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ROBINSON BRICK & TILE CO., Denver, Colorado ..... 9 units

KELSEY-FERGUSON BRICK CO., East Windsor Hill, Conn. ..... 11 units

OWENSBORO BRICK & TILE CO., Owensboro, Ky. ..... 10 units

H. B. SIPPLE BRICK CO., Stanton, Kentucky ..... 4 units

SLIDELL BRICK & TILE CO., Slidell, Louisiana ..... 6 units

TRI-STATE BRICK & TILE CO., Jackson, Mississippi ..... 4 units

YANKEE HILL BRICK MFG. CO., Lincoln, Nebraska ..... 6 units

LUMBERMEN'S BRICK & SUPPLY, Omaha, Nebraska .. 6 units

WHITE MOTOR TRANSPORTATION CO., Hauler for Sayre-Fisher Brick Co., South River, N. J. ..... 8 units

BORDEN BRICK & TILE CO., Goldsboro, N. Car. ..... 6 units

BROAD RIVER BRICK CO., Gaffney, South Carolina ..... 7 units

CHERAW BRICK WORKS, Cheraw, South Carolina ..... 6 units

GUIGNARD BRICK WORKS, Columbia, South Carolina ..... 5 units

RICHLAND SHALE PRODUCTS CO., Columbia, S. C. ..... 36 units

FRASER BRICK & TILE CO., San Antonio, Texas ..... 9 units

HENDERSON CLAY PRODUCTS CO., Henderson, Texas ..... 17 units

WEBSTER BRICK CO., Webster, Virginia ..... 7 units

— "Marching Forward with the Clay Industries in the 60's"

this is a *Perfect* brick . . .

. . . a creation of the Miller CROS-FLO Tunnel Kiln !

You, too, can produce perfect . . . more saleable ware . . . at an amazingly high production rate with the Miller Cros-Flo Tunnel Kiln. Owners across the nation report excellent production results and economical operation . . . day after day.

Let experienced Miller engineers analyze your needs and submit recommendations. There's no obligation, of course.

Miller also designs, engineers and erects Tunnel Kilns for Sewer Pipe Manufacturers. Write for full information, today.

Miller Cros-Flo* Tunnel Kilns Use CONTROLLED SCIENTIFIC Cooling For High Production

*Patent Applied For

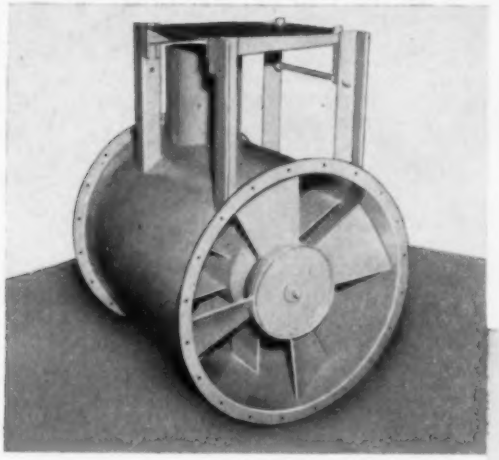
Miller Equipment Company

P. O. Box 1566 • Phone ME 3-3541 • Salisbury, N. C.

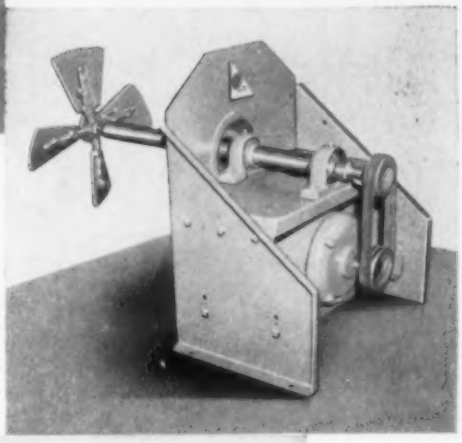
Southwestern Agent:
A. K. MOULTON ASSOCIATES
6936 San Pedro Avenue
San Antonio 12, Texas

Pacific Agent:
WALTER C. STOLL & SONS
5028 Alhambra Avenue
Los Angeles 32, California

SEVERE KILN RE-CIRCULATION CONDITIONS CALL FOR SPECIAL "BUFFALO" FANS



Large Brick Company utilizes these special "Buffalo" Type "B" Tube-Propeller Fans to provide 15,000 cfm at 360° F. Driven by V-belt through fairings, units are installed between inner and outer walls of kiln. Motor is located outside of kiln, away from heat.



Used by Leading Manufacturers of Tunnel Kilns, these "Buffalo" Type "NV" units are built into many of the package kilns in wide-spread use. Drive mounts against outside wall; shaft extends into kiln. Wheel is correctly shrouded to circulate hot air within kiln.

Throughout the Refractory Field, many of these special stainless steel "Buffalo" Type "NV" fans are used to handle air up to 1600° F. Shaft heat is reduced by heat slinger on shaft just behind the "NV" wheel. Oil leakage and fire hazards are eliminated by rigid, water-cooled bearings with special labyrinth seals. This construction was specially-designed by "Buffalo" engineers to fulfill the specific requirements.

Your "Buffalo" engineering representative will be glad to assist in planning the fans required for your jobs. Call him today, or write for Bulletin FM-2345.

Air circulation in severe kiln applications demands fans that can stand up to punishing day-after-day service without breakdown. Specially designed "Buffalo" Fans like those on this page are providing this kind of dependable service in installations all over the country. These special designs are based on "Buffalo" Type "NV" Heavy-Duty Propeller Fan Wheels. The blades are correctly shaped for optimum air moving at slow speeds. Die-stamped from heavy steel plate, these blades are firmly welded to sturdy, durable spiders.

Also handling hot air in a wide variety of kiln applications are specially-designed "Buffalo" Centrifugal Fans. "Buffalo" Exhausters with "M" wheels are supplying induced draft for lime kilns in many installations. All these special-purpose "Buffalo" Fans are engineered and built to provide maximum efficiency with a minimum of maintenance.

"Buffalo"

BUFFALO FORGE COMPANY

Buffalo, N. Y.

Buffalo Pumps Division, Buffalo, N. Y.

Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

VENTILATING • AIR CLEANING • AIR TEMPERING • INDUCED DRAFT • EXHAUSTING • FORCED DRAFT • COOLING • HEATING • PRESSURE BLOWING

If Low Shrinkage Is Demanded in the Manufacture of Your Ceramic Products, Specify...

AZO ZZZ-88

OTHER AZO ZINC OXIDES FOR CERAMICS AND GLASS

AZO ZZZ-55—For general use in ceramics and glass. Relatively small particle size, medium apparent bulk, approximately 32 lbs. per cubic ft.

AZODOX-55—De-aerated and densified. Chemically the same as AZO ZZZ-55. Cuts storage space, less dusting and relatively free-flowing. Suggested for use where a high apparent density, uncalcined product is desired and where pellets may be objectionable. Cubic foot weighs 60 pounds.

AZO ZZZ-11—For general use, giving heavier glaze consistency than AZO ZZZ-55. Acicular particle characteristics, high apparent bulk, 23 lbs. per cubic ft.

AZODOX-11—Similar to AZO ZZZ-11 in chemical and physical characteristics except for the low, dry bulk, 46 lbs. per cubic ft. Saves storage space, flows more freely and dusts less than ordinary zinc oxides.

AZO ZZZ-66—A French Process zinc oxide, apparent bulk 28 lbs. per cubic ft. Suggested for use where a high degree of purity is demanded.

This zinc oxide is already calcined at high temperature in a carefully controlled atmosphere. Large particle size, low bulk (approximately 75 lbs. per cubic ft.). Has thin glaze consistency. AZO ZZZ-88 is recommended wherever low shrinkage is a must.

SAVE STORAGE SPACE WITH AZO ZZZ-55 PELLETS

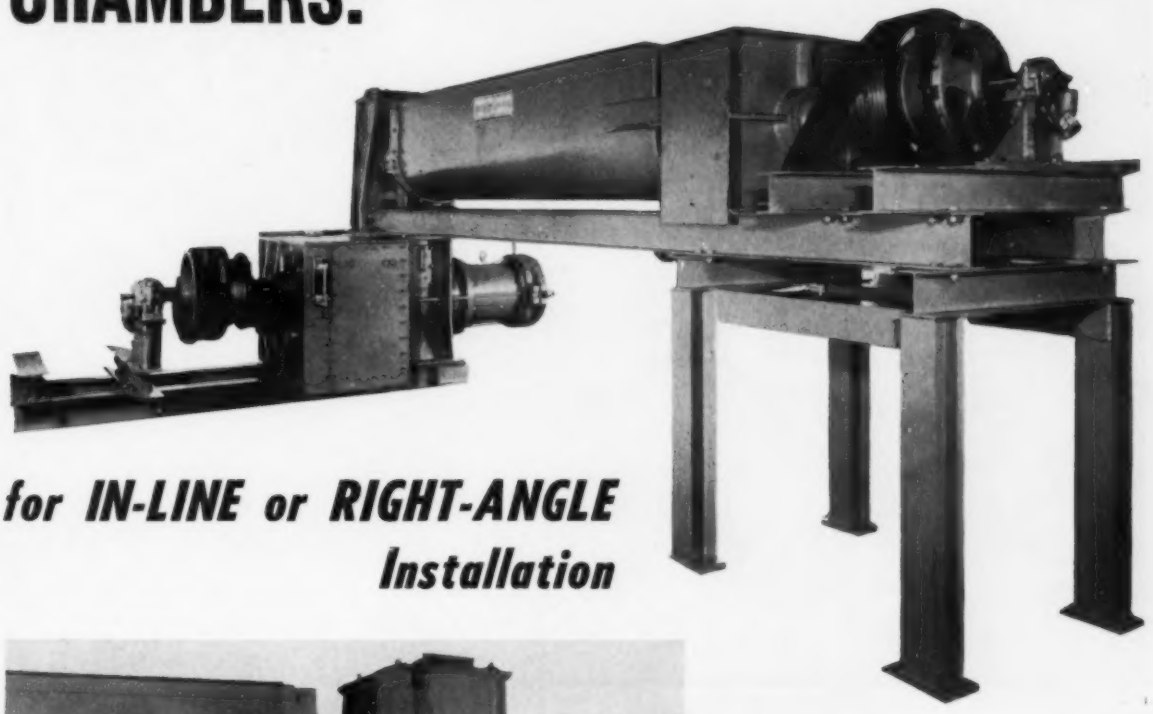
This pelletized zinc oxide weighs approximately 90 lbs. per cubic ft. With its high density, low bulk it requires much less storage space. Flows freely, mixes quickly and uniformly; relatively dust-free.

American Zinc has the exact grade and form of lead-free zinc oxide for your particular needs. Write or call for complete data.

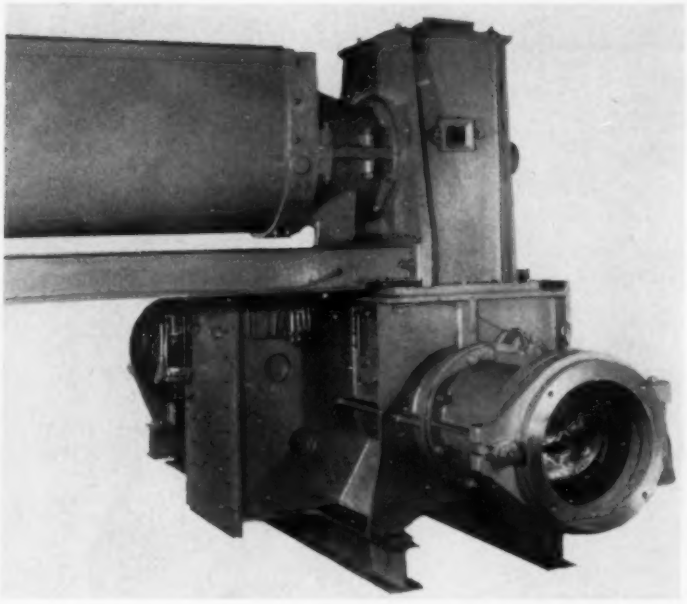
American Zinc sales company

Distributors for AMERICAN ZINC, LEAD & SMELTING COMPANY
COLUMBUS, OHIO • CHICAGO • ST. LOUIS • NEW YORK

NEW DESIGN by CHAMBERS: # 2-11 AUGER MACHINE



for IN-LINE or RIGHT-ANGLE Installation

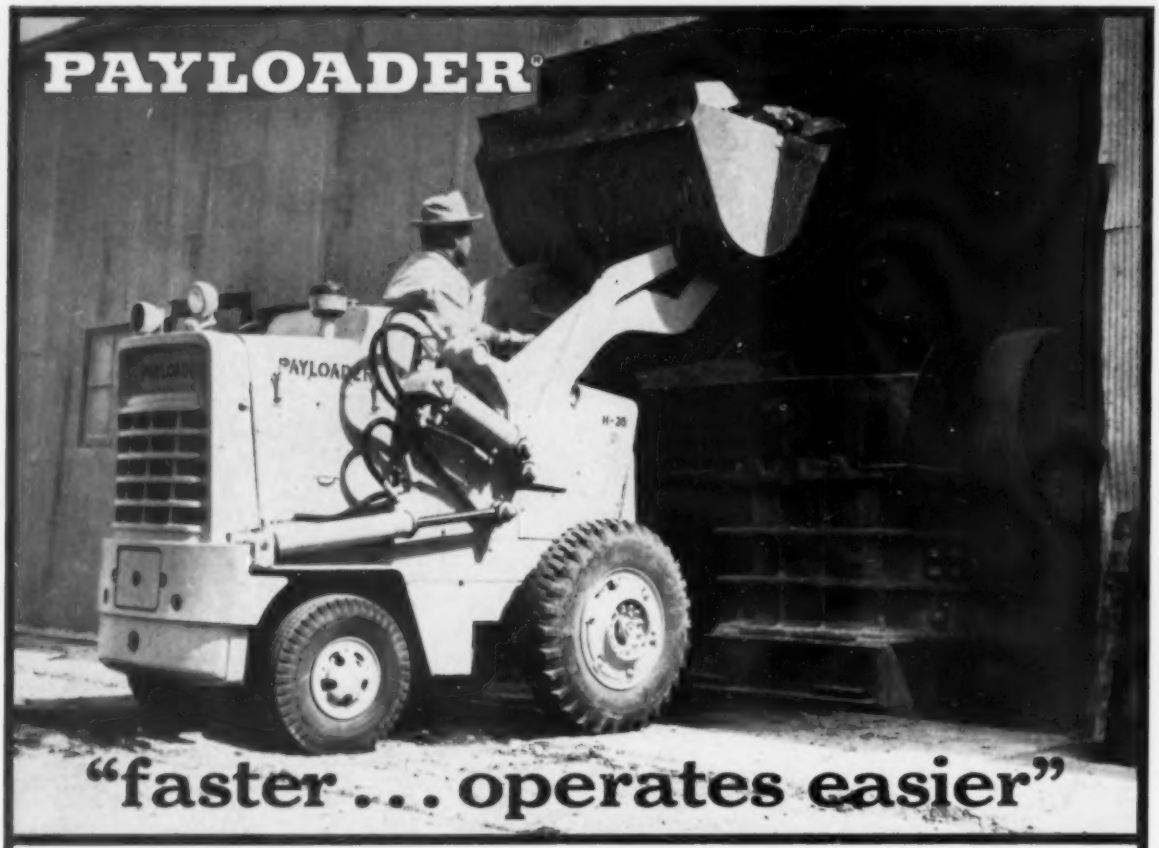


- Dual drive with remote control Fawick Clutches.
- Compact one-piece gear frame-vacuum case. Rigid, short, high tensile-strength shafting. Anti-friction bearings throughout.
- 28" x 12' Pug Mill with options of 34" or twin tub pug mill suitable for vacuum pugging without added height requirements.
- Double gear reductions for each unit. High-speed motors and compact, efficient drives. Centralized lubrication.
- Chambers unbreakable, stress-relieved welded steel construction throughout.
- Proven efficient auger & die design. Inquire about our all-steel double-hung die holder arrangement & further details.

SERVING YOUR INDUSTRY FOR OVER 100 YEARS

CHAMBERS BROTHERS CO. 1857 1959

52nd & Media Streets · PHILADELPHIA 31, PA.



PAYLOADER® units do many jobs:

- Unload railcars
- Load trucks and cars
- Feed mullers, crushers
- Charge hoppers, bins, conveyors
- Build stockpiles
- Spot and shift rail cars
- Push trucks

Indoors or outdoors

. . . wherever you have bulk materials to move . . . there's a "PAYLOADER" size and type to do the job . . . carry capacities from 2,000 to 12,000 lbs. Ask your Hough Distributor for a demonstration.

Standard Fire Brick Co., Pueblo, Colorado replaced a larger tractor-shovel with a model H-25 "PAYLOADER" feeding a jaw crusher from piles of silica rock, cull brick and two grades of clay. It is the newest of seven "PAYLOADER" units that Standard has purchased through the years including a large 4-wheel-drive type that handles heavier loading and mixing work.

The many superior features of the new H-25 benefit both the operator and the management. As operator Jess Rodriguez puts it, "My new loader is faster, easier to get around among the stockpiles and to keep ahead of the crusher. The bucket control is great too . . . makes clean hopper-loading simple."

With 2,500 lb. carry capacity, only 6 ft. turning radius and easy power-steering, the Model H-25 is the most concentrated package of tractor-shovel productivity in its size range. Power-shift transmission with two speeds forward *and* reverse, power-transfer "no-spin" differential, and 4,500 lbs. of bucket breakout force are other outstanding features that speed production and reduce operator effort.

HOUGH®

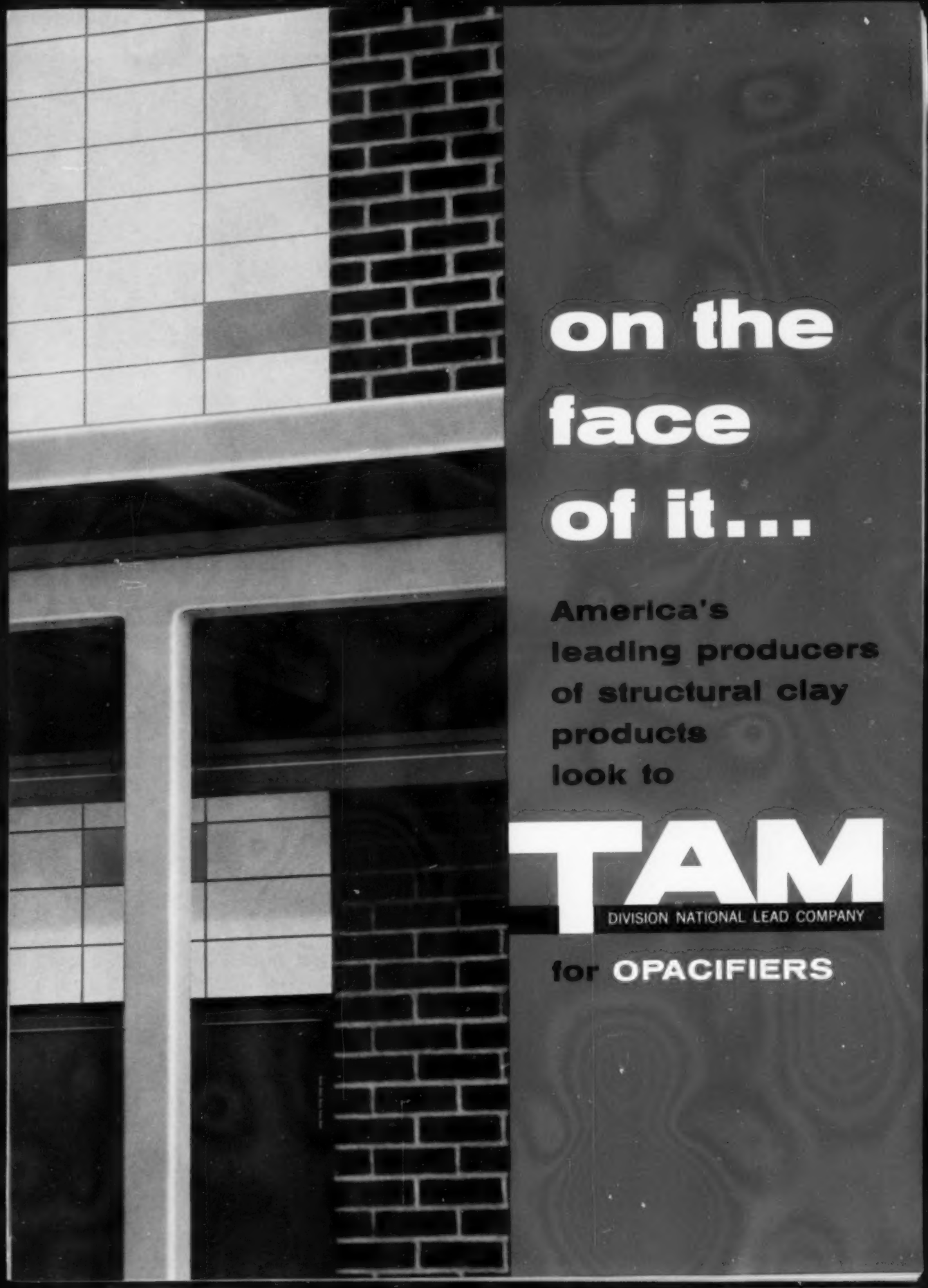
THE FRANK G. HOUGH CO.
LIBERTYVILLE, ILLINOIS
SUBSIDIARY — INTERNATIONAL HARVESTER COMPANY

THE FRANK G. HOUGH CO.
753 Sunnyside Ave., Libertyville, Ill.

Send data on complete "PAYLOADER" line and attachments

Name _____
Title _____
Company _____
Street _____
City _____ State _____

10-A-3


on the face of it...
America's leading producers of structural clay products look to
TAM
DIVISION NATIONAL LEAD COMPANY
for OPACIFIERS

1 **ROBCO** coral and white structural tile over entrance complements and relieves severity of brick facing.

2 **ROBINSON BRICK & TILE CO.** tiles in colorful patterns are used to advantage in bringing refreshing beauty to school corridors.

3 **ARKETEX CERAMIC CORPORATION** produced these glazed wall tiles which keep hospital interiors sparkling clean from entrance hall to operating room.

4 **ARKETEX CERAMIC CORPORATION** tiles surround a hospital examination room in unmarred brilliance . . . in demand where cleanliness is essential.

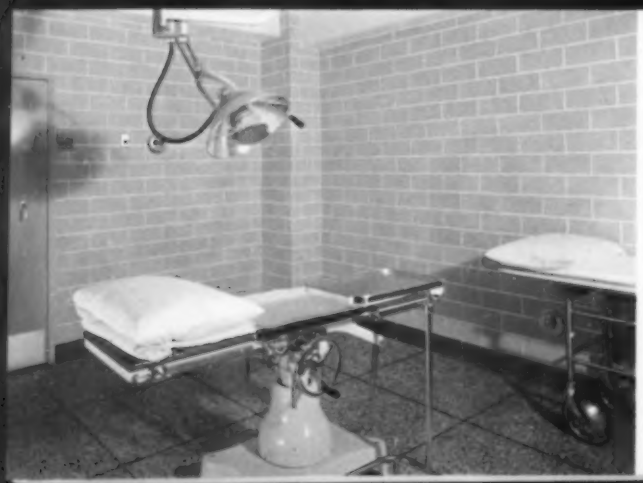
5 **NATCO CORPORATION'S** high glazing standards assure shade uniformity that makes a solid background for matching color schemes in this plant cafeteria.

6 Two shades of **NATCO** Ceramic Glaze Vitritile give clean, uncluttered air of spaciousness to this hospital lobby.

7 Flawless clear glaze and a wide range of shades in **NATCO** Ceramic Glaze Vitritile "6T" create halls that inspire rather than confine . . . match the modern educational trend.

8 **STARK CERAMIC, INC.** employs the latest advances in glazing to promote free expression in design; eliminate costly maintenance bills from school budgets.

NOTE: These producers all use TAM opacifiers in their operations.

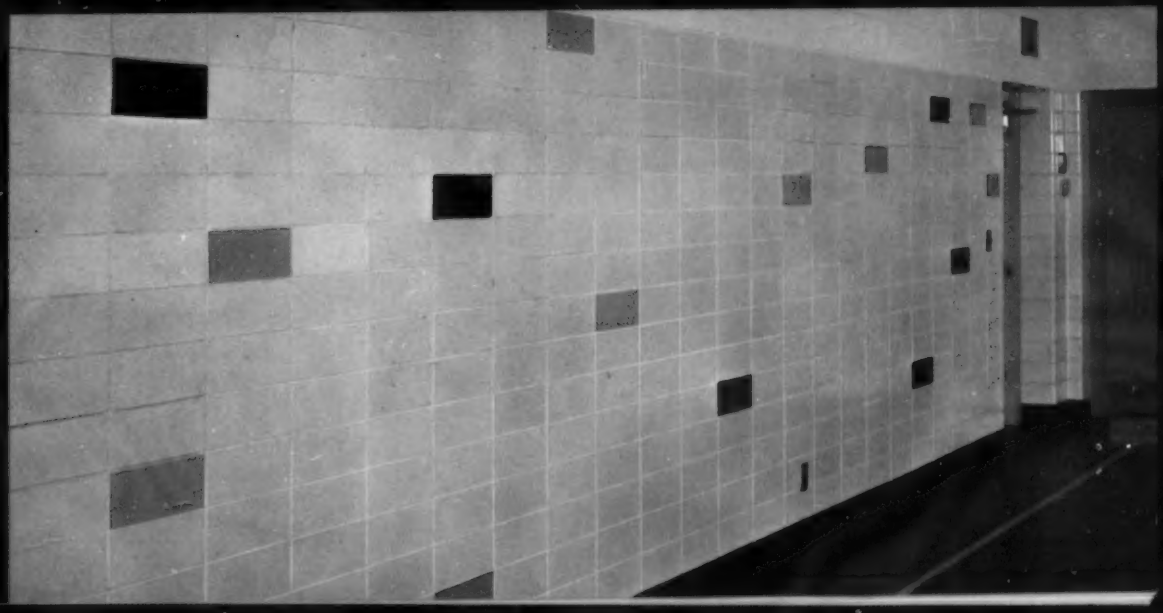


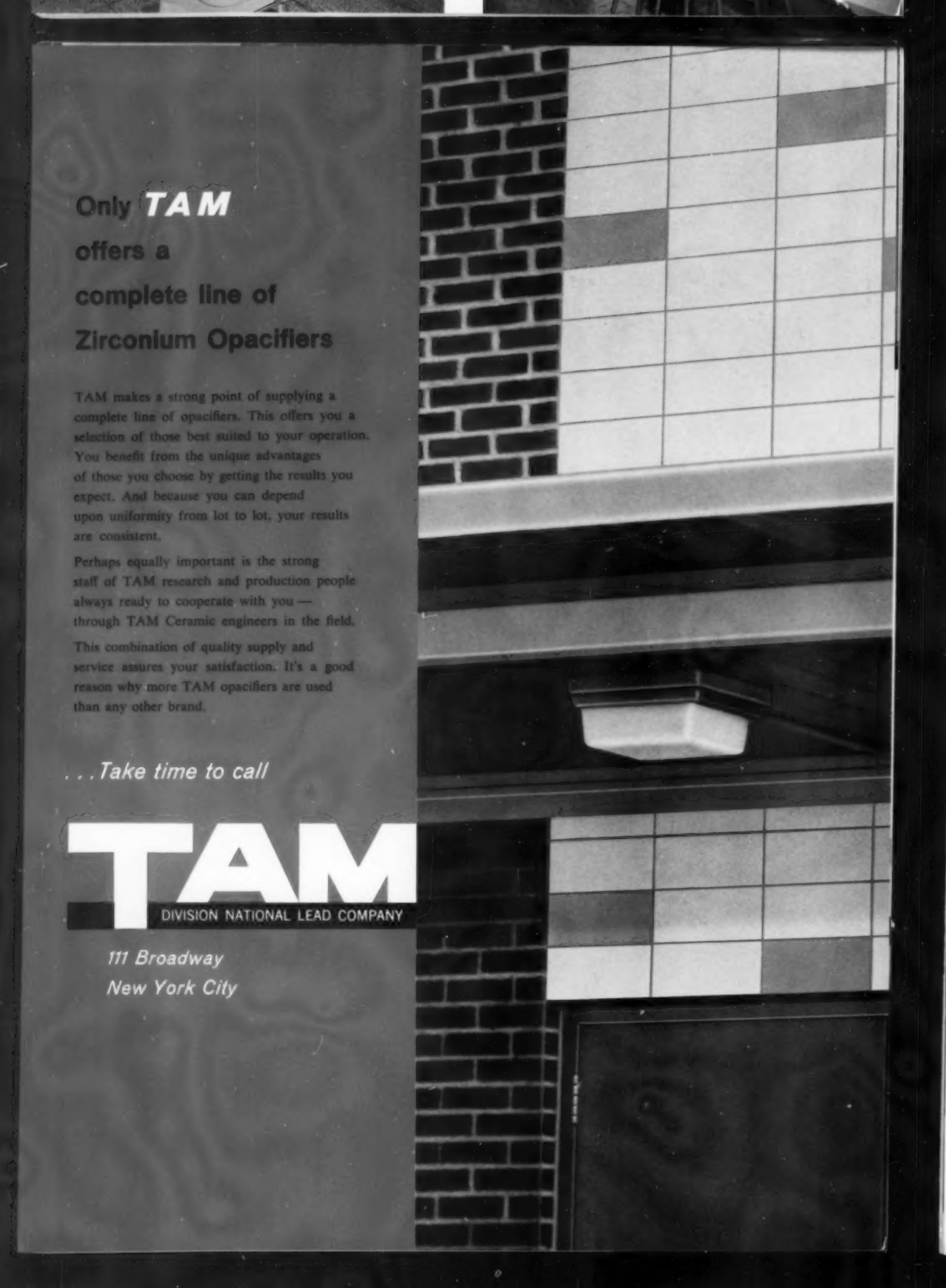
from schoolhouse to skyline—
your seeing—

the gleaming new face of America

Versatile glazed structural clay products are meeting today's architectural demands for a wider range of colors and patterns. Inherent strength and beauty combined with long life and low upkeep make them ideal materials of construction in all types of applications.

In the development of improved glazes, textures and colors . . . leading producers look to TAM for more efficient opacifiers which cost less to use while helping produce better clay products. Such basic advantages as uniformity, stability and high opacity are supplemented by economic benefits. Lesser amounts of TAM opacifiers give opacity equal to other brands. Additional amounts are being used to reduce rejects or to produce fewer shades in a run. The net result: economical production of superior quality glazed materials.





Only *TAM* offers a complete line of Zirconium Opacifiers

TAM makes a strong point of supplying a complete line of opacifiers. This offers you a selection of those best suited to your operation. You benefit from the unique advantages of those you choose by getting the results you expect. And because you can depend upon uniformity from lot to lot, your results are consistent.

Perhaps equally important is the strong staff of TAM research and production people always ready to cooperate with you — through TAM Ceramic engineers in the field.

This combination of quality supply and service assures your satisfaction. It's a good reason why more TAM opacifiers are used than any other brand.

. . . Take time to call

TAM

DIVISION NATIONAL LEAD COMPANY

111 Broadway
New York City

Never has there been a kiln car wheel to earn the industry's confidence as has the S-D "FLOATER"

"We think the best way to recommend or compliment S-D 'Floater' Wheels is to walk up to a loaded car and push it with one hand."

. . . says Mr. Homer Bryce, General Manager,
Henderson Clay Products Company
Henderson, Texas

"We have had excellent results with the Sanford-Day "Floater" Wheel. The first S-D Wheels we started using three years ago are still running as free as they did the first trip through the kiln."

. . . says Mr. C. B. Foushee, Sanford Brick and Tile Co.,
Sanford, N. C.

"We have congratulated ourselves many times on selecting your wheels and bearings for this operation."

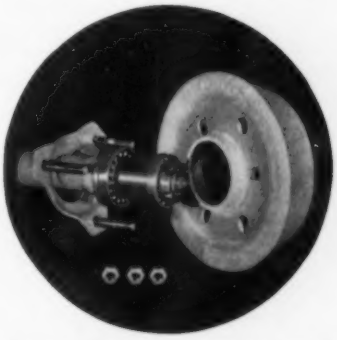
. . . says Supt. C. H. McDonald, West Brothers Brick Company,
Fairmont Heights, Maryland

"We are very much sold on Sanford-Day's Wheel and Bearing Assembly. From our experience and information we have gathered from other plants we are expecting years of trouble-free service."

. . . says Supt. Alvin Warden, W. G. Bush Co., Nashville, Tenn.

"We are well satisfied with our S-D Kiln Car Wheels"

. . . says Plant Engineer Philip D. Pearce,
Boren Clay Products Co., Pleasant
Garden, N. C.



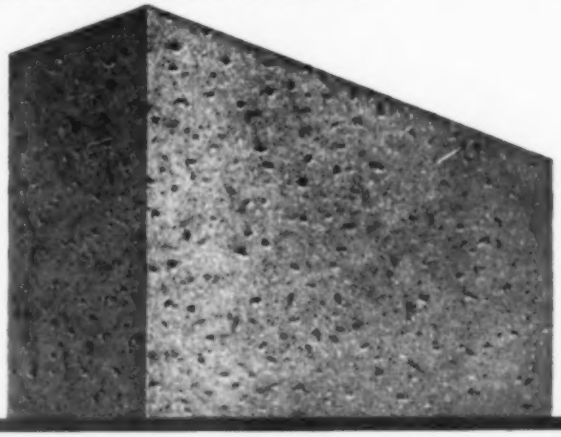
The S-D "Floater" Ball Bearing Kiln Car Wheel successfully incorporates (1) completely closed outer hub, and (2) inner hub completely protected by two metal grease seals. These exclusive features effectively eliminate dust while retaining the special high temperature lubricant.

Now you can eliminate old and obsolete kiln car wheels and their costly everyday maintenance and lubrication by using S-D "Floaters"—developed and PROVED in scores of kilns for trouble-free high temperature performance.

Many sizes and styles are available so that you can use S-D "Floaters" on your present cars. Also available with tapered roller bearings. Ask us for complete information. Or, send us photostatic copy or blueprint of your present cars. With this information we can quote you on replacement wheels now. Simply address inquiry to *Sanford-Day Iron Works, Inc., P. O. Box* 1511, *Knoxville, Tenn.* Your request will be handled promptly.

SANFORD-DAY
KNOXVILLE **TENNESSEE**

Supplier of first quality calcined bauxite to every major manufacturer of high alumina firebrick and super refractories



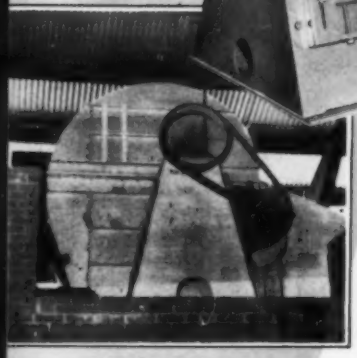
FOR SAMPLES and complete technical information on bauxite for your refractory requirements—call our nearest office.

Aluminium Limited

In the U. S., Aluminium Limited Sales, Inc.—630 Fifth Avenue, New York, N. Y.

CLEVELAND • CHICAGO • LOS ANGELES • DETROIT • ATLANTA • ST. LOUIS

HI-DRAFT FANS
A tubeaxial "Hi-Draft" fan for periodic down draft ceramic kilns.



TYPE "J" FAN
Delivers high air volumes at moderate pressures. May be built in a variety of arrangements for different applications.

In our 67th year

ROBINSON *Salutes*

THE STRUCTURAL CLAY PRODUCTS INSTITUTE

ON ITS

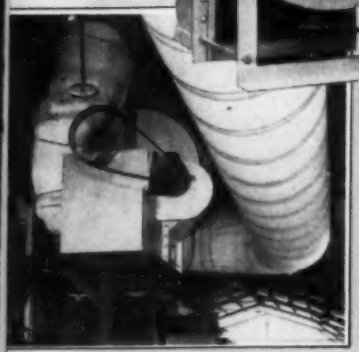
25th Anniversary

Robinson congratulates the Structural Clay Products Institute on its 25th year of progress and for its many valuable contributions to the ceramics industry.

Manufacturers of air handling equipment for the ceramic industry, we custom-engineer fans, blowers and exhausters to meet the specific requirements of your tunnel kiln, periodic kiln or product dryer. The services of our experienced engineers are available for the design of dryer, ventilation and exhaust systems to fit your particular needs.

Robinson fabricates units to handle a wide variety of applications and supplies a complete range of optional equipment including multi-leaf radial-type inlet and outlet dampers, screens, guards and inspection doors.

For complete information about Robinson products, write for free descriptive bulletins or call your local Robinson representative.



TYPE "AE-6-BB" EXHAUST FAN
Heavy duty exhauster handles air in moderate volumes, at moderate to high pressures. Suitable for many uses.

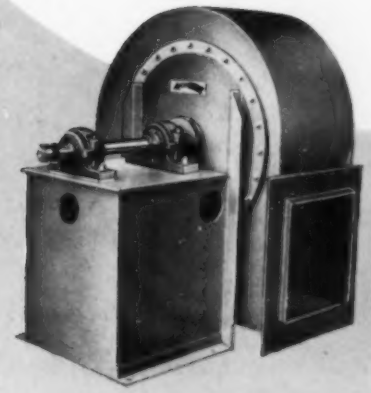
INDUSTRIAL FANS · BLOWERS · EXHAUSTERS

ROBINSON VENTILATING CO.

119 HENDERSON STREET, ZELIENOPLE, PA.

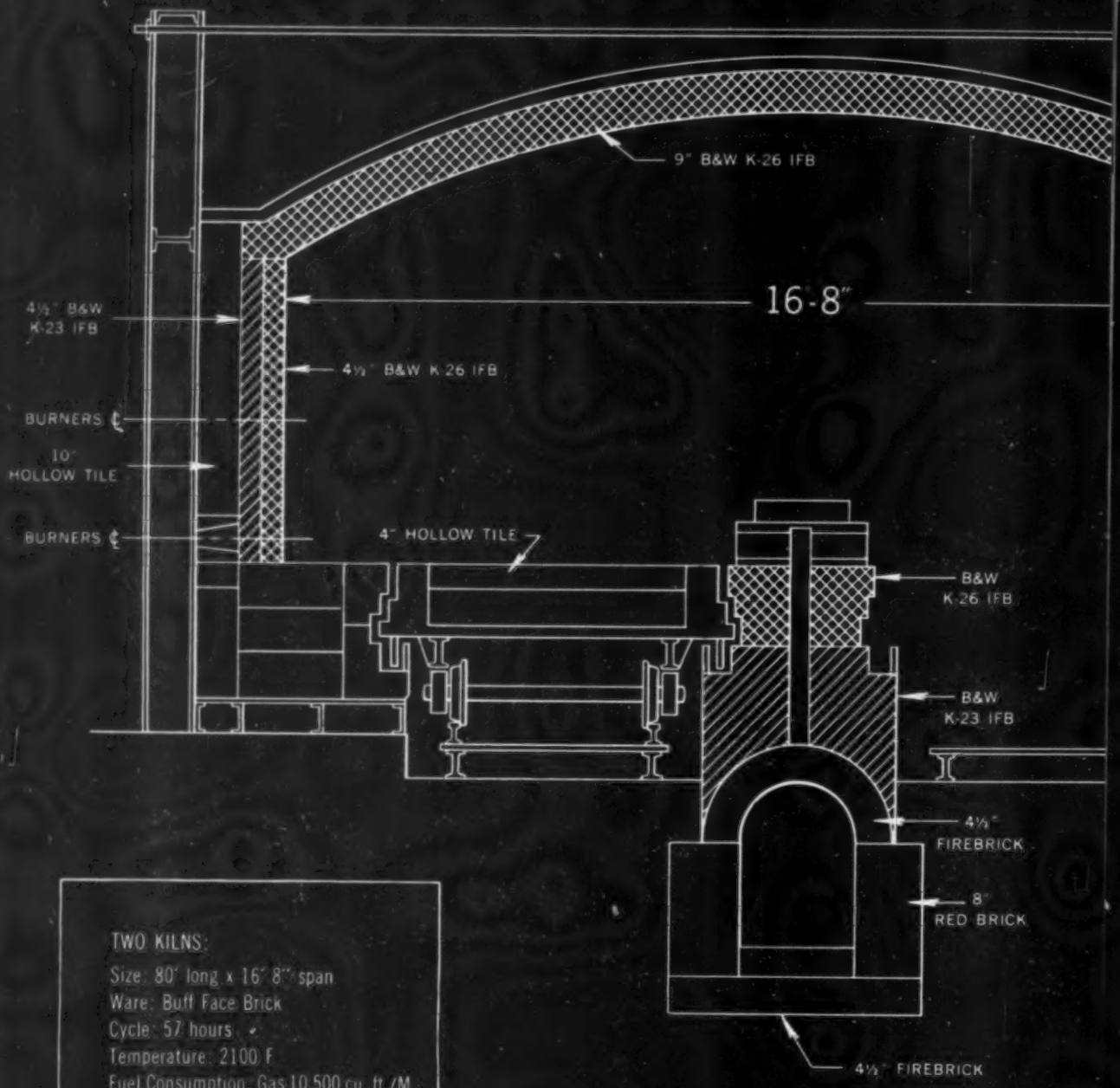
SUSTAINING ASSOCIATE SCPI

Member of AMCA

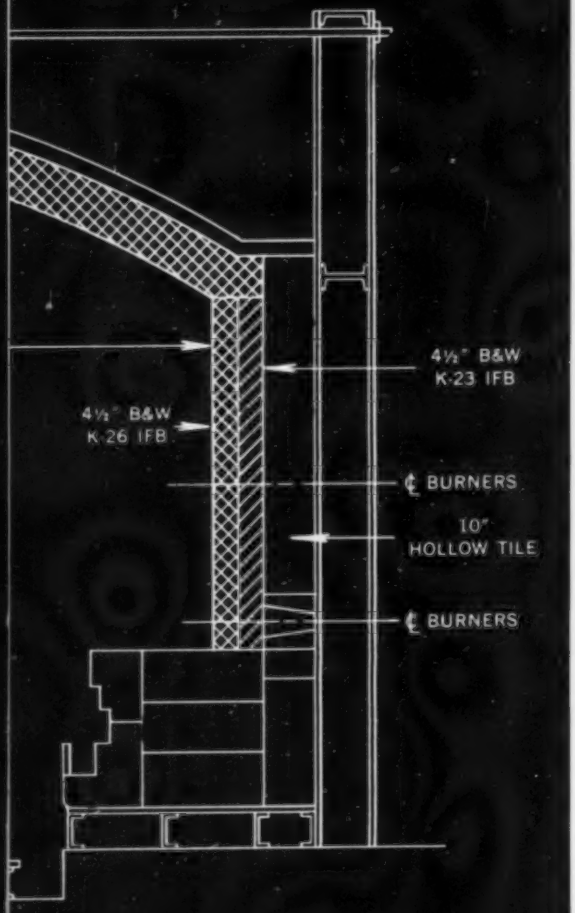


HIGH TEMPERATURE AND DRYER FANS
Designed for recirculating kiln air at temperatures up to 1650° F.

B&W SALUTES SCPI ON 25 YEARS OF PROGRESS



TWO KILNS:
Size: 80' long x 16' 8" span
Ware: Buff Face Brick
Cycle: 57 hours
Temperature: 2100 F
Fuel Consumption: Gas 10,500 cu. ft./M
Lining: B&W K-26 and K-23 IFB



TAYLOR CLAY PRODUCTS COMPANY

reports:

More than 800 burns in shuttle kiln lined with

B&W Insulating Firebrick

Two specially designed shuttle kilns lined with B&W Insulating Firebrick were built by Taylor Clay Products Company, Salisbury, North Carolina. This company reports:

The first shuttle kiln has completed 800 burns, and the second kiln over 600. The B&W IFB linings have withstood this long service very well. Product quality has been excellent. Over 99% of the output of these kilns has been grade A brick.

In both continuous and periodic kilns, B&W IFB cut production costs because they are the *lightest weight insulating firebrick made. Lightweight* means low thermal conductivity. In continuous kilns, this low thermal conductivity reduces the amount of heat transmitted through the walls—heat that would be lost to the atmosphere. *Lightweight* B&W IFB keep the heat in the furnace, permitting closer temperature control. *Lightweight* also means low heat storage. In the frequent heating and cooling cycle of periodic kilns, this low heat storage characteristic reduces heat loss because less heat is absorbed by the brick—heat that would be wasted during the cooling cycle. With less heat to dissipate, cycling time can be reduced, too.

In either type kiln, lightweight B&W IFB offer the additional advantages of savings in construction costs and reduced space requirements, both made possible because of thinner and lighter wall and roof constructions.

For more information on the uses of B&W Insulating Firebrick in the structural clay products industry, write for Bulletin R-43 to The Babcock & Wilcox Company, Refractories Division, 161 East 42nd Street, New York 17, N. Y.

B&W

THE BABCOCK & WILCOX COMPANY

REFRACTORIES DIVISION

B&W Firebrick, Insulating Firebrick, and Refractory Castables, Plastics, Ramming Mixes, Mortars, and Ceramic Fiber.

BRISTOL complete

The key to higher quality, more uniform production, greater efficiency

Modern, complete Bristol instrumentation will help you to get the best results from your tunnel kilns. When you put kiln temperatures and draft under Bristol control, you can expect a more uniform, higher quality product—and a significant reduction in fuel cost. Control systems designed to meet the requirements of individual tunnel kilns have often paid for themselves many times over. Find out today how to put Bristol instrumentation to work in your plant. Write The Bristol Company, 170 Bristol Road, Waterbury 20, Conn.

Fig. 2—*Dynamaster® Electronic Pyrometer Controller for high-temperature zone.*

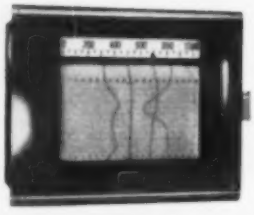


Fig. 3—*Dynamaster® Electronic Multi-point Pyrometer Recorder records temperatures in pre-heat and cooling zones.*

Bristol Dynamaster* Electronic Potentiometer Pyrometers

. . . service-tested and proved in thousands of industrial plant installations, fully measure up to the requirements of today's most advanced ceramic plants. These modern features make them ideal for tunnel kiln instrumentation:

1. *Continuous standardization*—eliminates usual standardizing mechanism and dry cell—no interruption to control.
2. *Simple design*—few moving parts.
3. *Easy to use and service*—minimum maintenance.
4. *Rugged construction*—continued accuracy and reliability under tough ceramic plant conditions.

High-Temperature Zone Control: Both pneumatic (Fig. 2) and electric Dynamaster Controllers are available in a wide variety of models to give any type of control action with either thermocouples or Pyrovisor radiation units (Figs. 4 and 5). Control valves are available for every application.

Preheat and Cooling Zone Recorders: Dynamaster Multiple-Record Pyrometers (Fig. 3) give records of preheat and cooling zone temperatures (up to 24 points), providing a convenient visual check of kiln heat distribution. Offered with either thermocouples or Pyrovisor radiation units.

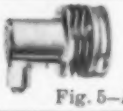


Fig. 4—*Modern Kiln Thermocouples.*

Fig. 5—*Pyrovisor Radiation Units.*

Thermocouples . . . Radiation Units for all ranges of temperature All Bristol Pyrometers can be furnished with either thermocouple (up to 3200° F.) or radiation (up to 5000° F.) temperature sensing units. Write for Bulletin P1238.

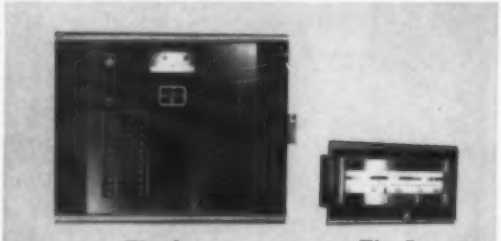


Fig. 6

Fig. 7

Indicating Pyrometers Bristol Indicating Pyrometers, both potentiometer (Fig. 6) and millivoltmeter (Fig. 7) types, with selector switches for use with any required number of thermocouples, are ideal for the monitoring of temperatures throughout a kiln. These instruments can be furnished with dual ranges for use with both Chromel-Alumel† and platinum thermocouples. The selector switch provides for thermocouple switching. Ask for Bulletins P1244, P1245A.

Fig. 6—*Dynamaster Multi-Point Indicating Pyrometer for making temperature survey of kiln.*

Fig. 7—*Millivoltmeter-Type Multi-Point Indicating Pyrometer. Switches for 12, 24, or 36 points.*

†T.M. Reg. by Hoskins Manufacturing Co.

Draft Controllers and Recorders Bristol Draft Controllers (Fig. 8) are offered in both indicating and recording models in ranges 0 to 0.2 up to 0 to 1.5 inches of water across the scale. They spot pressure changes down to less than 0.001 inch. Accurate modern draft control helps maintain proper heat distribution throughout the tunnel kiln and makes for better kiln performance.

Fig. 8—*Indicating Draft Controller.*

Pusher Pressure Recording Gauge Bristol Pusher Pressure Recorders (Fig. 9) maintain a 24-hour record of kiln operation. They show the exact time of charging a new car and because they are equipped with spring-wound chart drives also give a record of power interruptions.

Fig. 9—*Pusher Pressure Gauge.*

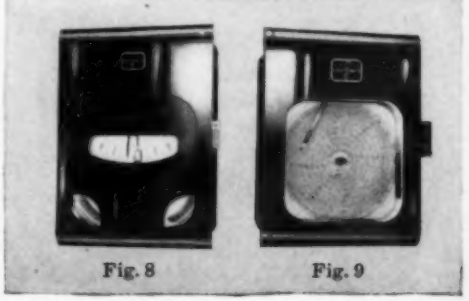


Fig. 8

Fig. 9

tunnel kiln instrumentation

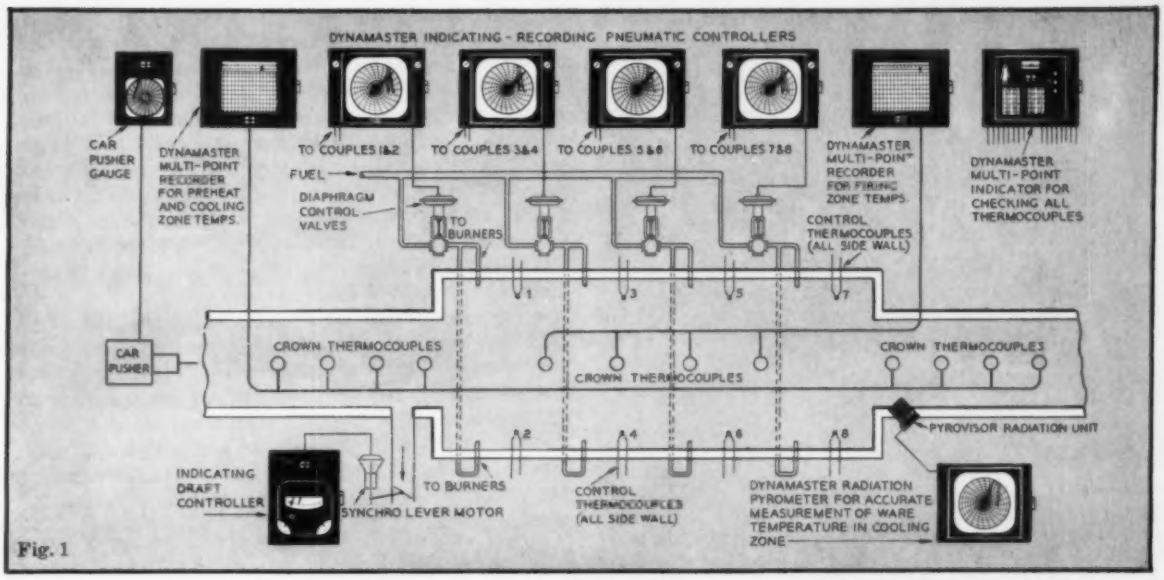

DYNAMASTER INDICATING - RECORDING PNEUMATIC CONTROLLERS
CAR PUSHER GAUGE
DYNAMASTER MULTI-POINT RECORDER FOR PREHEAT AND COOLING ZONE TEMPS.
TO COUPLES 1&2
TO COUPLES 3&4
TO COUPLES 5&6
TO COUPLES 7&8
DYNAMASTER MULTI-POINT* RECORDER FOR FIRING ZONE TEMPS.
DYNAMASTER MULTI-POINT INDICATOR FOR CHECKING ALL THERMOCOUPLES
FUEL
DIAPHRAGM CONTROL VALVES
TO BURNERS
CONTROL THERMOCOUPLES (ALL SIDE WALL)
CAR PUSHER
CROWN THERMOCOUPLES
CROWN THERMOCOUPLES
CROWN THERMOCOUPLES
PYROVISOR RADIATION UNIT
INDICATING DRAFT CONTROLLER
SYNCHRO LEVER MOTOR
TO BURNERS
CONTROL THERMOCOUPLES (ALL SIDE WALL)
DYNAMASTER RADIATION PYROMETER FOR ACCURATE MEASUREMENT OF WARE TEMPERATURE IN COOLING ZONE
Fig. 1

Fig. 1—Typical Bristol tunnel kiln instrumentation for effective control is shown in this diagram. The instruments selected and the method of application depend on conditions peculiar to each installation. Bristol has a nationwide organization of instrument engineers and factory-trained service men prepared to work closely with you in designing, selecting, and installing instrument systems for your kilns—and also in keeping your instruments in continuous tip-top operating condition.

Fig. 10

New Dynamaster*Test Pyrometer steps up tunnel kiln firing quality

This new Dynamaster Test Pyrometer installation (Figs. 10 and 11) in an abrasive products plant allows better, more precise adjustment of temperatures in a 250-foot-long tunnel kiln. Four-point Dynamaster Recording Pyrometer with "Armorox" thermocouples on test car draws an accurate temperature profile of each deck of the car throughout the length of the kiln.

Fig. 10—*Bristol Dynamaster* Traveling Tunnel Kiln Pyrometer measures actual firing temperatures of abrasive wheels through 250-ft. kiln.*

Fig. 11—*Firing temperatures, measured by "Armorox" thermocouples mounted on test car, are continuously recorded on Dynamaster Potentiometer Pyrometer as shown in this schematic.* 6.52

**T.M. Reg. U.S. Pat. Off.*

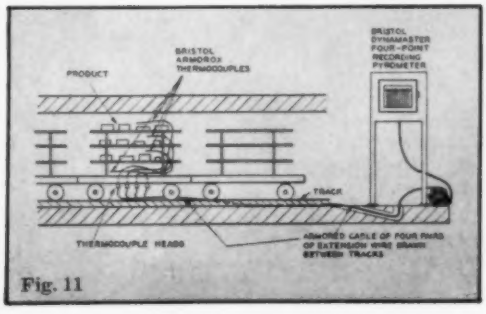


Fig. 11

BRISTOL

Ceramic Plant Instrumentation

Since 1910

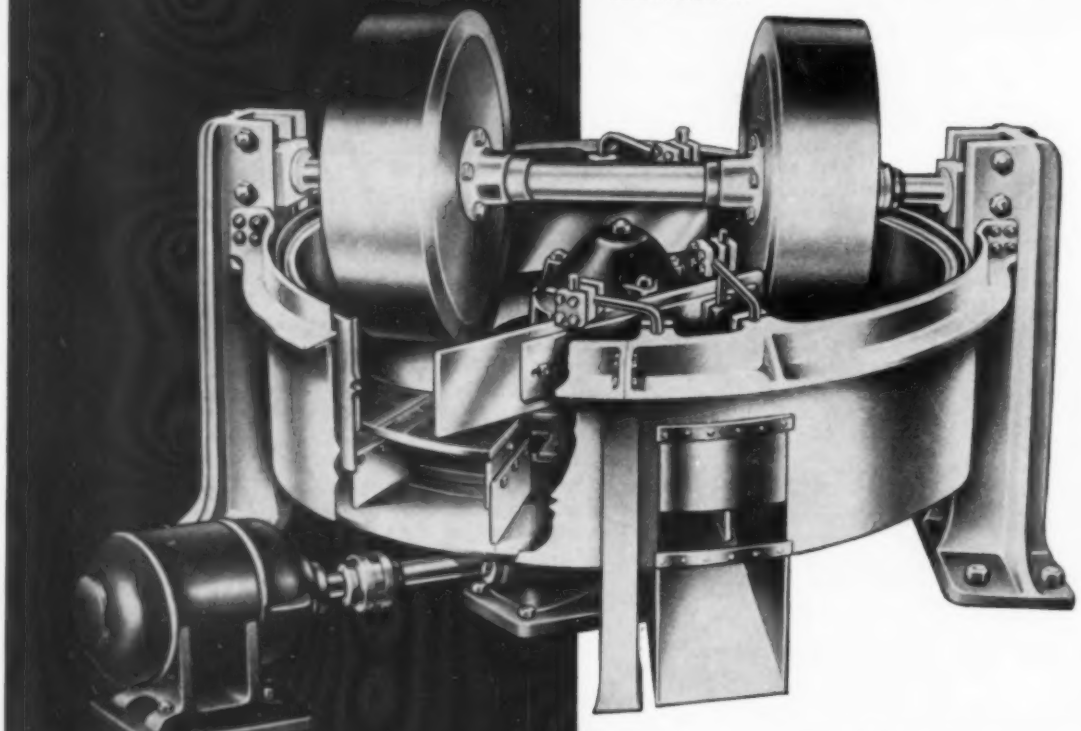
Grinding at its best!

the new High-Efficiency CLEARFIELD DRY PAN...

Clearfield's newest addition to its wide line of grinding machines for the refractory and ceramic industries has all the features that have made the Clearfield name famous for durability and efficiency in service . . . plus design and construction improvements that assure even greater grinding and production economies.

The new Model 900 comes in 8½ or 9-foot diameters and features a direct motor underdrive. With this method of drive, the worm engages a gear attached to the underside of the main revolving pan bottom; thus power is applied at a point very close to the grinding load . . . less power is needed, vibration is reduced, and since all equipment is accessible from the floor, maintenance and replacements are easier and quicker. Worm and gear operate in an oil bath and are completely enclosed in a dust-and-oil-tight cast-iron housing.

Crushing rolls are wide faced and spread far apart to give maximum crushing area per revolution . . . high production is achieved without excessive pan speeds, thereby reducing vibration, prolonging life of the machine. The ample screen plate area quickly discharges the correctly-ground material to the conveyor for screening or storage. All parts are durably constructed for long-life service with minimum maintenance.



For mechanical and design details on the new Model 900 – or any of our all-purpose grinders – just write for our technical bulletins. No obligation, of course.

CLEARFIELD
MACHINE COMPANY

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PENNSYLVANIA, U.S.A.

Pacific Coast Representative: Fernholtz Machinery Company
8468 Melrose Place, Los Angeles 46, Calif.

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1. Advertised Goods
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Inorganic colors by FERRO CORP are developed from long experience in all kinds of brickmaking-retain color uniformity and light and heat stability through ton after ton of brick.

20/Circle on Reader's Service Coupon

Precision wheels for brick and clay and ceramic industries is the product of SAN-FORD DAY. Company is ready to help with wheels problems.

21/Circle on Reader's Service Coupon

No. 5-A vacuum extruder by CHAMBERS BROS. CO. Machine has shown a wide usefulness for the extrusion of an infinite variety of ceramic products.

22/Circle on Reader's Service Coupon

Dry press by BOYD for quality building brick. Is said to give more profit volume, durability, low maintenance, flexibility to the product line and top quality product at high production rates.

23/Circle on Reader's Service Coupon

HOW TO USE:

All you do is circle the number of the editorial item or the page number of the advertisement on this card, and mail it to us.

Vitrified Clay Pipe by LOGAN in king-size lengths with factory made points that are reported to cut installation time by half or more.

24/Circle on Reader's Service Coupon

Color for bricks is featured by DRAKENFELD. Their research in this field promotes vivid colors that is said to meet architects demands for color in today's building construction.

25/Circle on Reader's Service Coupon

11-59

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20 Ferro Corp.
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24 Logan Clay Products
25 Drakenfeld, B. F.
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27 Stoody Co.
28 Acme Steel Co.
29 Hannon & Sons, F. R.
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This card void after January 30, 1960

Maximum air moving efficiency with minimum maintenance with "Buffalo" type BL fan by BUFFALO FORGE CO. Supplies ventilating, air conditioning and air cleaning systems.

26/Circle on Reader's Service Coupon

Answers to most wear problems in brick and clay plants elaborated on in section 4 of the STOODY guidebook. It contains alloy recommendations and detailing welding procedures for rebuilding and hard-facing most brick and clay equipment subject to severe wear.

27/Circle on Reader's Service Coupon

Steel Strapped Pipe by ACME STEEL CO. aids in reducing manual handling operations by 50% between kiln and user and permits loading and unloading reportedly eight times faster in certain situations.

28/Circle on Reader's Service Coupon

Electric screen heaters by F. R. HANNON & SONS serve industry four ways. They eliminate binding, increase tonnage, build greater profits and speed production.

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MILLER EQUIPMENT CO. cross-flow tunnel kilns use controlled scientific cooling for high production. Available from the company is hammermill crushers, conveyor equipment, engineering service.

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Grinder by EAGLE IRON WORKS is said to yield twice the output of 9' dry pans. Higher speeds facilitate rapid removal of ground material through rim slot discharge reducing power consumption.

31/Circle on Reader's Service Coupon

Steam or hot water generators by THE NORTH AMERICAN MFG. CO. Are completely engineered units. Are factory assembled packaged units completely piped, wired, and trimmed so that only fuel, vent, water steam, and electric power connections are required on the job site.

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Lower grinding costs, positive product control, more grinding in less time, and less expensse upkeep are some of the features of the WILLIAMS reversible impactor.

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Pack-Hauler by PACK-HAULER. Is said to build up sales, eliminate costly handloading and unloading and solve long-haul problems too. Less inventory, fewer damage claims, increased plant efficiency and time-saving are some of features.

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For color-faced tile or brick "Ceramic" colors are said to match any standard institute color or special color for structural clay products. A product of the CERAMIC COLOR AND CHEMICAL MFG. CO.

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Double the texture of your brick, turning of your culls into No. 1 premium brick and fast production are but a few of the advantages of doing business with the ROCK-FACER CO.

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Superlite unloaders by BUILDERS EQUIPMENT CO., reportedly cut delivery costs, lower pay load loss, more deliveries, lowers first cost and lowest operating cost.

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Mail this coupon today to DENVER FIRE CLAY COMPANY 3005 Blake Street, Denver 17, Colorado

can help you

Cut Hot Load Sag

spalling loss...slagging...with

new DRAGON brand

high quality semi-silica brick

...made in standard series and special shapes

Specify and use for heat-treating and forge furnaces; heating and reheat furnace side walls and roofs; open-hearth checkers, side walls and arches; blast-furnace checkers, domes, combustion chambers and skin walls; soaking pit covers, roofs and side walls; tunnel kiln and periodic kiln linings; and rotary kiln driers and coolers. Possesses high hot-load strength, excellent workability at upper temperature limits with out deformation. Try it yourself! Mail the coupon above!

DF8-3

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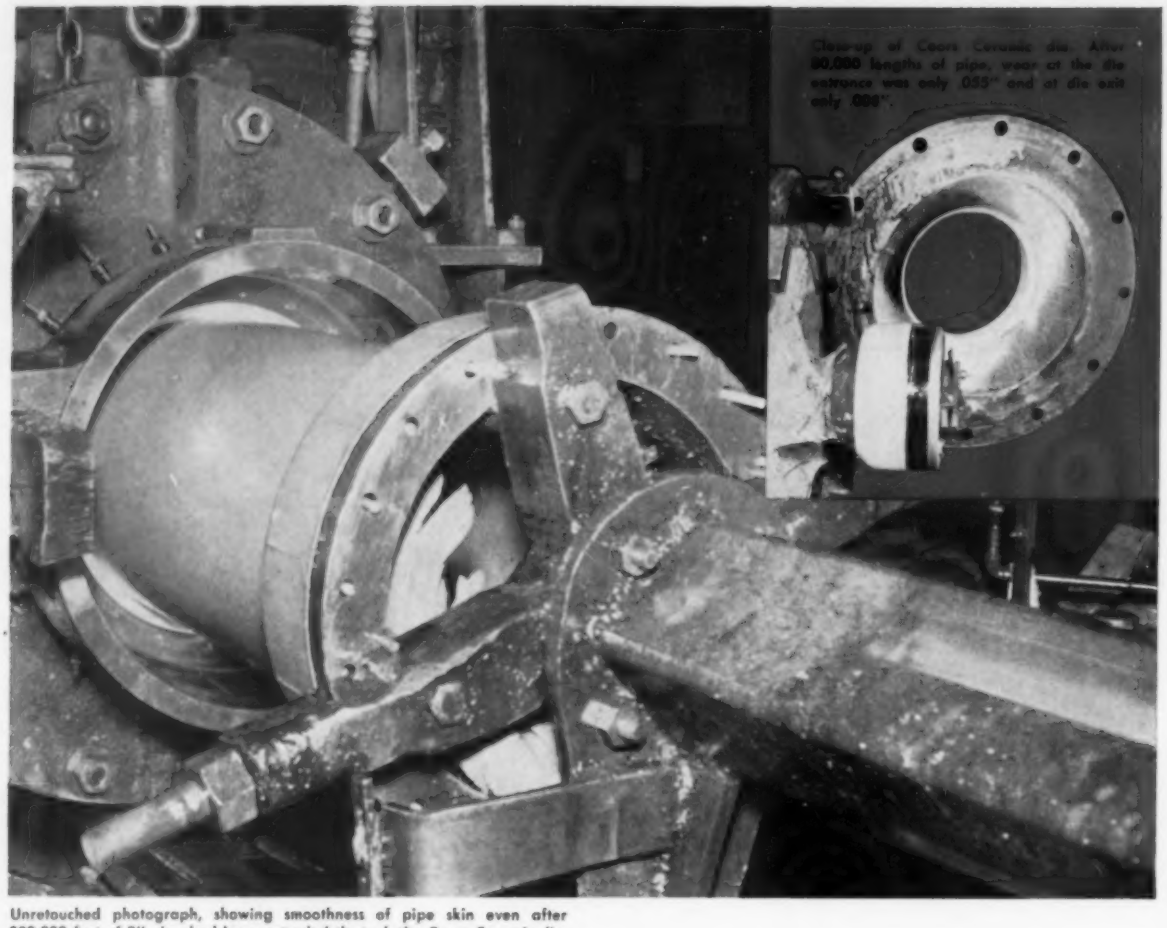
Denver Fire Clay Company

DENVER • SALT LAKE CITY • EL PASO



Close-up of Coors Ceramic die. After 80,000 lengths of pipe, wear at the die entrance was only .033" and at die exit only .026".

Unretouched photograph, showing smoothness of pipe skin even after 320,000 feet of 8" pipe had been extruded through the Coors Ceramic die.

PIPE DIES OF COORS CERAMIC OUTLAST METAL DIES 10 to 1

Production of over 100,000 lengths of 8" sewer pipe—400,000 feet of pipe—is the record-breaking output of the new die and bell liners used by the Denver Brick and Pipe Company, Denver, Colorado. These new liners are made of Coors High Alumina Ceramic, a high strength material that is extremely resistant to abrasion or erosion.

Formerly, cast iron dies produced only 4,000 lengths of pipe, case-hardened steel 9,000 lengths at most, and alloy steel only 6,000 lengths.

Now, with the Coors Ceramic liners, there is no significant increase in pipe weight even after production of as many as 80,000 lengths of pipe. This results in saving of clay. Skin texture of the pipe remains smooth—no scores, cracks or grooves.

The Coors Ceramic die and bell liners have not only provided a reduction in maintenance and replacement costs—the far longer life of the ceramic makes these dies economical to use.

Coors Ceramic Dies are providing these money-saving benefits:

• At least 140 cubic yards of clay saved between die liner changes • Pipe skin remains smooth for over 400,000 feet of pipe • Drier losses are cut • Ceramic dies are lasting 10 times longer than case-hardened steel... 17 times longer than alloy steel • Down time, maintenance and replacement costs have been substantially reduced.

Your nearby Coors Engineer will be glad to talk to you about ceramic die and bell liners for your sewer pipe machines, or ceramic parts for your other extrusion equipment.

WRITE TODAY FOR COMPLETE INFORMATION

Coors

COORS PORCELAIN COMPANY

600 Ninth Street, Golden, Colorado

HOW LONG
has it been since you figured your handling costs
BRICK PACKAGING for MORE NET PROFIT
Cuts handling costs
Simplifies inventory
Improves housekeeping
Increases brick sales appeal
Reduces breakage
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Send for this informative illustrated guide to the unitizing of brick in steel strapped bundles. Methods, equipment, different size packs are discussed from your point of view —what they cost, what they save, and what they contribute to profits. Use the convenient coupon to send for your copy now.

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First in steel strapping

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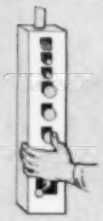
the new BOYD PRESS

these improved features mean better brick at lower costs

Constant mechanical improvement continues to make Boyd Press the logical choice for top profit dollar from high volume dry press brick production. Shown below are a few of the improvements which have been made to the Boyd Press in recent years. They combine to make *your* next press . . . *—the best Boyd yet!*

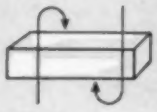


BOYDAMATIC

Easily operated control system provides full automatic operation — or selective combination of manual and semi-automatic controls over various press operations.

TOP 'N BOTTOM ACTION

Pressure is exerted upon both the top and bottom of brick in the mold — to reduce density variance to a minimum, insure better, more stable brick.



DE-AIRING PAUSE

Momentary pause in press operation allows air to escape before final compression stroke. You get dense, finely proportioned brick and reduce distortion in firing and use.

1 **NEW BEARINGS.** High speed shafts are fitted with sealed roller bearings; low speed shafts with renewable plastic inserts.

2 **STRONGER TOGGLES** are of all steel rib construction. Load bearing surface increased 100%. All bronze or steel bearing surfaces are replaceable.

3 **HEAVIER FRAMES.** Heavier journals and more ribbing increase stability and rigidity of the Boyd Press.

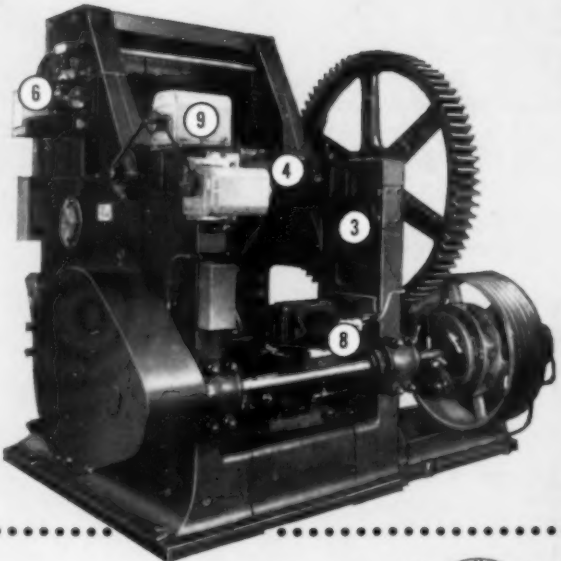
4 **ALLOYING,** heat treating and flame hardening make gears, crankshaft, side bars and crosshead tougher, longer wearing—smoother running.

5 **END GRAIN FORMICA** used for frame wear plates. Is durable, smooth and easy to replace. Is non-"galling."

6 **AUTOMATIC FORCE-FEED LUBRICATION** is positive, thorough. Takes element of human error out of routine press maintenance.

7 **AIR OPERATED CLUTCH-BRAKE** gives instant response to *Boydamatic* controls. Is positive and trouble-free.

8 **AIR OPERATED CHARGER** is completely flexible. Can be operated continuously with press cycle or controlled for single stroke by switch.



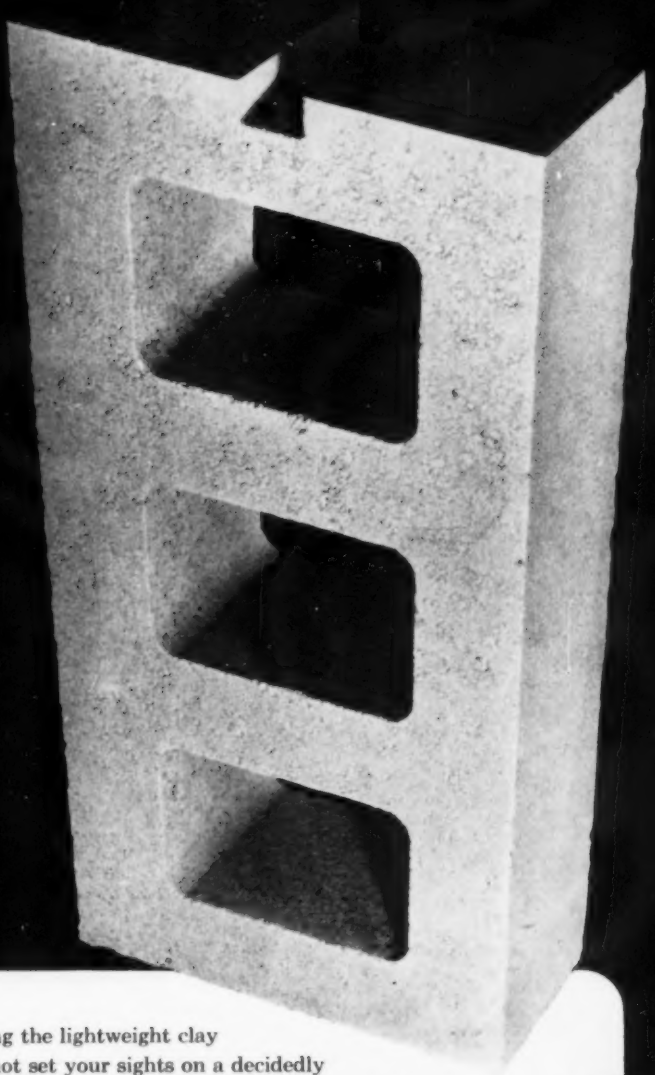
9 **"BRAINS"** for the new flexibility of the Boyd Press is found in this sequencing rotary cam limit switch.

Congratulations S.C.P.I

—on your Silver Anniversary of outstanding service to the Brick and Tile Industry . . .

. . . CONSIDERING CLAY BLOCK?

Here are 10 reasons why DRY PRESS block is easier to make and easier to sell



Here's why it's easier to MAKE:

Set direct to kiln car to speed production. High green strength resists marking and breakage.

Low moisture greatly reduces shrinkage and shrinkage losses, slashes firing time and helps to assure . . .

Dimensional Stability that is easier to attain and control.

Less maintenance because you have fewer machinery components. All you need is mixer and press.

Less manpower. No special skills needed. Control is effected in batching and preparation of material. Press is automatic, and fast . . . one man handles forming.

Here's why it's easier to SELL:

Refractory durability. Dry press block is dense and tough . . . has greater compressive strength than any type of block used in construction.

Straight, square edges give it an appearance that's more than surface deep . . . to sell on sight. You'll be proud to display dry press block.

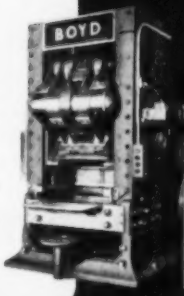
Tops in size accuracy. Because it's pressed out in a die . . . you get equal perfection on all faces and can sell to specifications which cannot be met by extruded or wet process clay block.

Easy to glaze and easier to paint because you get equal density on all faces. Can take any texture before firing.

Striking beauty. Dry press brick can command premium prices . . . yet production costs are commensurate with other types of block.

If you are considering the lightweight clay block market, why not set your sights on a decidedly *superior* product . . . one that can be used for *either* facing or backup?

CB&W engineers are ready to show you how and why Boyd Press can produce a competitively priced, fast selling, easy to produce brick block . . . which cannot be duplicated for density, durability and sales winning beauty—by any other production means. Just write for details.



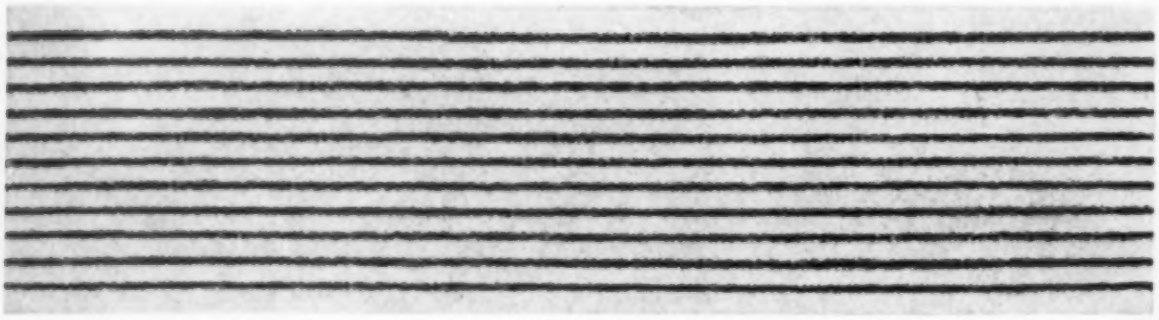
CHISHOLM, BOYD & WHITE COMPANY

A SUBSIDIARY OF WEHR STEEL CO.

610 W. 57th STREET **CHICAGO 21, ILLINOIS**

BOYD
POWER PRESS

Kimberly-Clark Corporation,
maker of Additive-A,
congratulates the SCPI
on its 25th anniversary.



Reduce wear on augurs, dies, liners— lubricate with Additive-A* clay conditioner

Add up to 50% to the life of your knives, augurs, dies and liners with the effective body lubrication you get with the use of Additive-A clay conditioner. Additive-A makes clay easier to extrude, lets you use less power, cuts down time and maintenance costs.

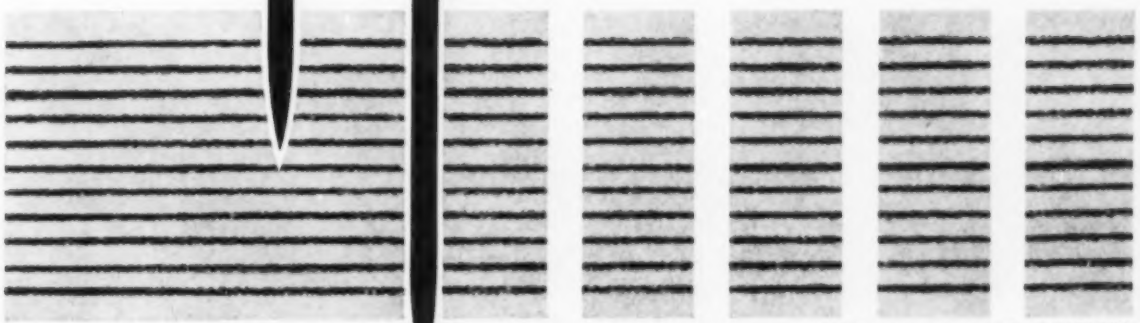
Other important advantages of using Additive-A clay conditioner are: Increases green plastic strength • Permits reduction of tempering water • Cuts dryer loss • Reduces laminations • Improves workability of clay • Increases dry green strength • Permits more even temper • Effectively controls scumming • Upgrades quality of all ware.

Write for descriptive folder, to:

KIMBERLY-CLARK CORPORATION

NEENAH, WISCONSIN
CHEMICAL PRODUCTS

ADDITIVE-A



ADDITIVE-A is a trademark of KIMBERLY-CLARK CORP.
*Patented and patents pending.

Question your AIM*...La Salle Construction Company did...

Steel strapped brick saves builder time and dollars

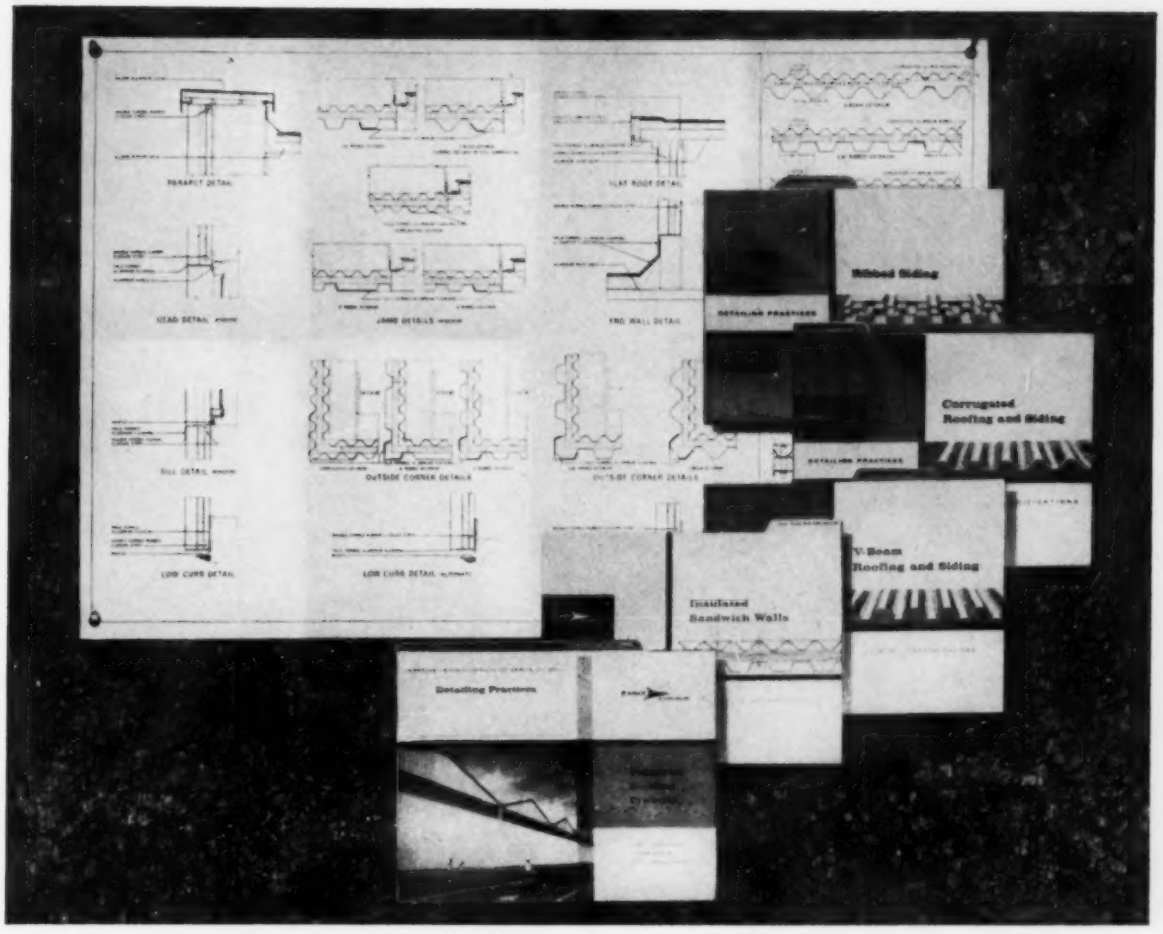
Acme Idea Man, Phil Raley typifies the packaging experts available to La Salle Construction Company and you.

LA SALLE CONSTRUCTION CO., Chicago, Ill., is saving important materials handling time and labor dollars by requesting that brick be supplied in Acme Steel Strapped packages of 100. (Idea No. S3-17) Three 100-brick packs are lifted by crane to the building floor where they will be used. Then the 100-brick packs are individually delivered by buggy to the exact location desired by the masons.

In addition to saving an estimated 20% on brick handling labor, La Salle finds that handling damage, formerly estimated at 5% of the brick shipment, was virtually eliminated. By using packaged brick and a crane, La Salle found that a load of 10,000 brick can be unloaded and delivered to the building floor in about one hour. This compares to a minimum of three hours for two men just to unload the same number of un-strapped brick by hand.

***Question your Acme Idea Man.** His files contain scores of clues to ways your products can be more efficiently packaged. Write Dept. BES-119, Acme Steel Products Division, Acme Steel Company, Chicago 27, Illinois. In Canada, Acme Steel Company of Canada, Ltd., 743 Warden Avenue, Toronto 13, Ontario.

ACME STEEL **STEEL STRAPPING**



Valuable NEW design aid

Complete detailing practices portfolio for industrial roofing, siding and insulated sandwich wall now ready from Kaiser Aluminum

Now – in one master file, complete in four folios – Kaiser Aluminum offers you dozens of typical details plus suggested specifications on its line of industrial building products.

For example, the folio shown here (covering 4-inch, 8-inch and 5.33-inch pitch ribbed siding) shows typical details (scale 3" = 1') of: Eave; Window at head; Window at jamb; Window at sill; Low curb; High curb; Ridge; Expansion joint; Outside corner; Flat roof; Gable end rake; End wall; Parapet.

Similar details are included in folios for corrugated roofing and siding, V-beam roofing and siding, field assembled insulated sandwich walls.

Be sure to take advantage of the helpful information contained in this free portfolio. Mail the coupon now. We'll send you your portfolio immediately.

Kaiser Aluminum construction industry specialists are immediately available to offer engineering assistance for the application of these aluminum roofing and siding products. Contact your nearest Kaiser Aluminum sales office for full information.

KAISER ALUMINUM

THE BRIGHT STAR OF METALS

Kaiser Aluminum & Chemical Sales, Inc.
Dept. IB16, 1924 Broadway
Oakland 12, California

Please send me your free "Detailing Practices Portfolio for Industrial Building Products."

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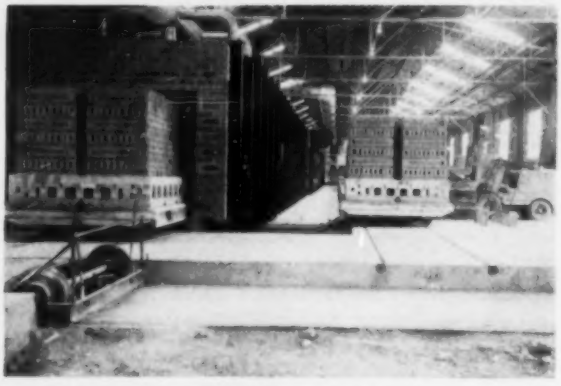

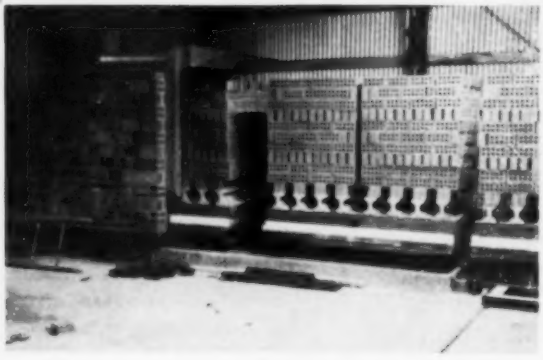

HERE ARE THE FACTS:

OHIO TUNNEL KILNS are the best suited to YOUR PLANT! They are made for all types of ware and both the largest and smallest sized production.

OHIO TUNNEL KILNS produce the most UNIFORM BURNING and even colors with the least possible loss!

OHIO TUNNEL KILNS cost less installed in your plant for they are produced in volume at a minimum cost, all the material is fabricated in our own shop and erected by our own crews!

OHIO TUNNEL KILNS will fit your operation and pocketbook! All of the exclusive features are yours at no extra cost.

***VISITORS** are always welcome at our shop and when you are close to central Ohio we would appreciate your stopping in. We will be glad to arrange to have you vist both "in-operation" and "under-construction" installations.*

FAST • EFFICIENT
CLIPPER
LOW COST

OHIO KILNS
GRANVILLE, OHIO • JU 2-2571

PHIPPS CONSERVATORY, DEPARTMENT OF PARKS AND RECREATION, CITY OF PITTSBURGH

RIVALING NATURE'S COLORS

American-Made Colors of Precision

UNDERGLAZE AND OVERGLAZE COLORS—
GLAZE STAINS—BODY AND ENGOBE STAINS

QUALITY INSURES ECONOMY

The experience of more than a century of fine color manufacture is yours to call upon. Our colors are of the highest quality and consistently uniform. They have met the demands of discriminating users of many years. All inquiries will receive our prompt attention.

MASON

Color and Chemical Works, Inc.

East Liverpool, Ohio, U.S.A.

ESTABLISHED 1842

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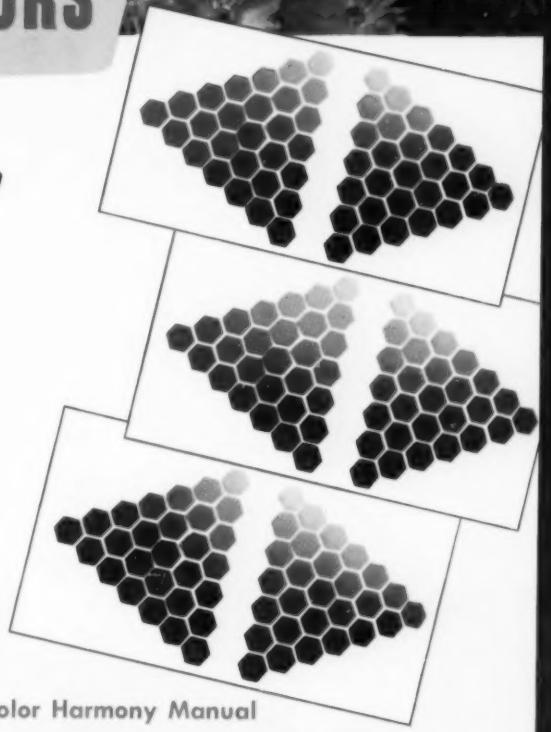
Los Angeles 13, California



Color Harmony Manual

We can match the colors shown in this book which is the copyrighted property of The Container Corporation of America. Just wire, write or phone, giving us the code number and type of color desired. We can match most colors quickly and easily.

A single bead of AC-DC Borod on leading edge of this auger flight increased life 300 to 400% over the conventional hard-facing technique.

STOODY BOROD HOLDS AUGER EDGES LONGER

Triples auger life, reduces downtime, eases extruder starts, cuts power requirements!

In a California brick plant, trouble was experienced starting the extruder after an overnight shutdown. Investigation traced the problem to a peculiar wear pattern developing on the outer edges of the auger flights. Normally, auger faces and gauges were hard-faced, but with the abrasive material processed this method allowed the flights to thin down on the outer edge. Clay then packed tightly between the wear-tapered flight edge and the extruder housing. Result? Balky starts, a hot-running thrust bearing and an overloaded motor.

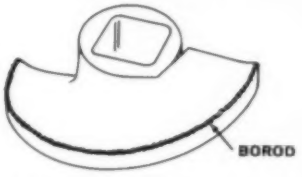
To overcome this difficulty, the weldor changed his hard-facing technique on new augers. A single, hard-metal bead was applied to the leading corner of the flight edge. This procedure held corner size and allowed wear to dish the flight from gauge to hub, as well as scour the surface. Packing of clay between auger and housing was thereafter eliminated.

A 15% to 30% saving in power was gained and the extruder started readily after shutdowns. Average runs between auger changes increased from 60,000 to between 200,000 and 250,000 bricks! Augers have been rebuilt as many as five times.

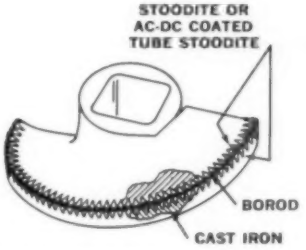
The Stoody Guidebook gives data on many more equipment-saving applications. Ask your Stoody Dealer for your free copy (check the Yellow Pages) or write direct.

STOODY COMPANY
11950 East Slauson Avenue
Whittier, California

HARD-FACING PROCEDURE



NEW AUGER: Apply a single bead of 3/16" AC-DC Borod to the corner of the leading flight edge.



WORN AUGER: Build-up severely worn face of cast iron augers with cast iron electrodes, then apply a bead of 3/16" Stoodite or AC-DC Coated Tube Stoodite on both gauge and leading face. Follow with a single bead of Borod welded on corner between the two Stoodite beads.

NOTE: Always pre-heat cast iron augers 2-3 hours to a "black" red before hard-facing. After hard-facing bring to a higher oven heat. Soak 2-4 hours and slow cool to prevent checking or breaking. Touch-up damaged deposits after installation to prevent cut-outs.

Brick & Clay RECORD NEWS REPORT

A complete, compact news section summarizing all developments for the industry's attention.

INDUSTRY NEWS
PRODUCT NEWS
READERS' COMMENTS
PRODUCTION IDEAS

Robinson Brick & Tile Opens Dynamic New Sales Office

Both sales techniques brand new to the Rocky Mountain brick industry and display ideas never used before in the nation are featured in the colorful new Sales Office and Display Center, which Robinson Brick & Tile Company, Denver, Colorado, opened recently.

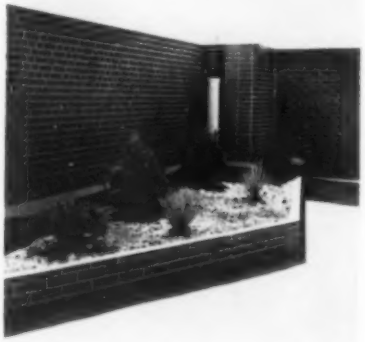
Replacing what was merely a storage yard on the west side of the big Robinson plant, the new Sales Office and Display Center capitalizes upon completion of the Valley Highway, piping some 50,000 cars per day past the spot. "Where we were at one time sunk back in the industrial recesses of the city, we are out on continuous display today" F.

Sales Office and Display Center of the Robinson Brick and Tile Co., 400 So. Santa Fe Drive, Denver, Colo. features unique display of Robco brick, structural glazed tile and 3/8" Vitrineer. Front grill of sales office is Robco's new Diamond Solar Screen.

George Robinson, president, indicated.

To make certain that Robco displays it's wares in the most attractive possible setting to the thousands whizzing by hourly, day and night, the Denver brick firm went to Gene Kramer, a Denver commercial art expert, to design a swept-wing, open-air structure which embodies over 300 ideas in brick and tile construction, in the form of walls, pylons, pillars, sample walls, and tile work on all sides. With more than 4,000 square feet of space, the new building is definitely an "industry first" and offers a convenient center where architect, homeowner, and contractor can shop over one display panel after another, night and day, for sparkling ideas in design.

Facilities include the central office building, including the business office, three sales offices, and a "conference room" in which a customer can sit down with his builder or architect, discuss the proposed structure, and use actual samples to make decisions. Fringing the center building is a swept-back "roof", pillar supports of brick and tile, roof-walls with impressionistically designed brick, tile, and ceramic panels. No two sections are anything alike, incorporating Robco's Vitrineer into plain walls, neo-classic variations, sharp contrast in patterns, etc. Each of the outer supporting posts, in the form of inverted wedges, are faced with opposite examples of Robco's brick, while the enclosing "wing wall" at each other end features a huge three-pronged motif in brilliant gold. Sections of brick at either end of the building are glazed in brilliant color, sections of blue contrasting with bright orange glaze, black with yellow, and blue with yellow. The 40-foot front of the building is covered over with diamond solar screen 8 by 8 by 8 tiled, in horizon blue, with white wiped joints. A



Creative ideas like this use of Robco brick and Structural Glazed Tile are typical of the displays featured at the Robco Display Center in Denver. The Center is floodlighted at night to permit viewing after working hours.

crass telephone pole, extending at the left end of the building, has been enclosed in delicate wooden lace work, as the only non-fired structural material used.

The left end of the building is of brushed brick with an inset motif panel of vitrineer, the next supporting wall featuring the same sort of insets, but varieties of Norman's brick, flush, projecting, and color-contrasted. The outside wall on the left is a "patio wall" with a 30 foot planter running around it, in which examples of cactus, ferns, and conifers have been planted. Other walls illustrate colorful, unusual methods of brick in open work, and one towering 12 by 10 foot wall incorporates 10 colors, in white, green, black, yellow, blue, orange, and rust.

A circular driveway extends around behind the building, and there are some 50 sample walls exposed, on both sides of the driveway. Eight foot sections display such ideas as autumn leaf satintex brick in vertical herringbone with white struck joints, 14 glazes of vitrineer, some 30 sections of brick including matt, pebble, coaneal, autumn leaf, rose pink matt, chocolate matt, buckskin, flashed, grain texture, ivory, and half bricks. A corral fence encloses the extreme rear.

Within the office showroom, walls on either side are devoted to samples of brick and tile.

A Look at The Latest in Industry News

J. J. Jurgens, Robinson Clay Factories' Head Retires

Retirement of J. J. Jurgens, general superintendent of five factories of the Robinson Clay Products Co., Akron, Ohio, is announced by W. E. Robinson, president. Jurgens' retirement, effective October 1, climaxes 50 years of service with Robinson Clay, one of the nation's oldest and largest manufacturers of clay pipe and related clay products, now in its 103rd year. He received a 50-year pin and an engraved gold watch, at

a special dinner in his honor. Jurgens was general superintendent of Factories 3, 4 and 5, Parral, Ohio; Factory 6, Midvale, Ohio; and Factory 14, Strasburg, Ohio. Jurgens' tenure with Robinson Clay dates back to 1908 on a part-time basis, and continuously from 1911.

Ottawa Canada Area Site of New Brick Plant

A modern brick plant with a capacity of 50 million brick per year is to be constructed in the Ottawa area, it was announced recently by R. G. Rogers, v.p. of Cooksville Laprarie Brick Ltd., a division of Dominion Tar and Chemical Co. Ltd. Rogers said that the plant will employ some 100 men. The exact location was not disclosed. Construction is expected to start in the near future with the anticipated date for completion of the first kiln around September 1st of next year.

Robinson Adds Six Kilns

The construction of six 40-ft. periodic kilns is spearheading a $750,000 expansion program at Robinson Clay Product Co.'s Factory 8 at Pottstown, Pa. An important part of Robinson's wedge-lock joint clay pipe production is concentrated at Pottstown. The firm also has plants in the Dover area

To Explore North Ont.

Exploration of the Missinaibi basin some 50 miles north of the Kapuskasing for china clay and other minerals will start soon. An American company, American Nepheline Ltd. has been granted a license by the Ontario Dept. of Mines to explore more than 570,000 acres. The license issued for three years gives the company the right to explore for kaolin.

Fire Destroys Ohio Plant

Fire touched off by an explosion in a gasoline furnace destroyed the Stillwater Clay Products Co. plant in Urichsville, Ohio, recently. Fire officials estimated damage at $750,000. The three main plant buildings were a total loss.

Injured was H. A. Veigel, elevator operator, who suffered second degree burns on arms and legs. The plant normally employs 125, but only a few men were in the shop, doing weekend maintenance, when the furnace exploded.

Monongahela Company Sold

The Monongahela Clay Products Co., Monongahela, Pa., has been sold to a newly formed corporation called the Monongahela Clay Products, Inc. The former owners are R. Harold Simpson and the estate of his late brother, R. Kenneth Simpson.

Frank Saglime, Greensburg, has become the new manager. He has had considerable experience in the field of clay products manufacturing, a spokesman for the corporation said.

Gets Patent For Brick Coloring Process

H. B. Foster, an engineer with Brick & Tile Service, Inc., Greensboro, N. C., has invented an inexpensive process for permanently coloring bricks and tile without the use of paints. Foster stated that the process will require no change in brick-making methods and no expensive machinery. After making hundreds of experiments over a two-year period, Foster found that applying a combination of metallic oxides to unfired brick produced unusually fine colors ranging from white to black. He was awarded patent No. 2,902,739.

Callaway to Denver Fire Clay

Phillip E. Callaway, 32, former assistant to the ceramic engineer of the Colorado Fuel & Iron Company, was named to the refractory sales staff of the Denver Fire Clay Company. DFC manufactures heavy refractories, refractory specialties and

industrial furnaces and is reportedly the only manufacturer of metallurgical clay goods in the U. S. Callaway, who was employed at CF & I for seven years, is a native Pueblan and was educated at Pueblo High and Pueblo College in Colorado.

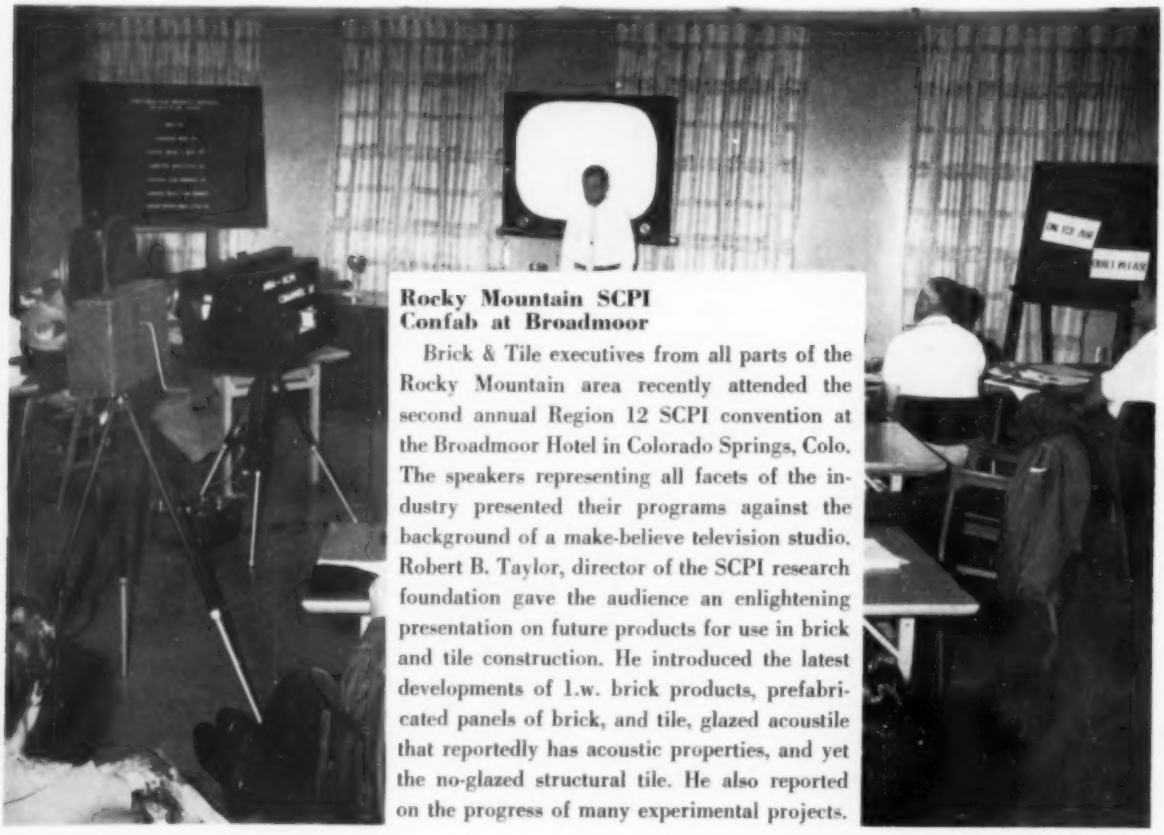
Offer Sound-Proof Tile

Metropolitan Brick, Inc., of Canton, Ohio is producing a new concept in ceramic glazed structural facing tile, it was announced recently by Charles S. Erwin, v.p. and general sales manager. The tile known as "SCR Acoustile", is one of the latest developments of SCPI at Geneva, Ill., of which Metropolitan is a member. With the new product it is reportedly possible to build, finish and sound condition a wall in a single operation. Architect Richard Lawrence (right) of Lawrence-Dykes & Associates, of Canton, Ohio, and R. D. Shively (of Metropolitan Brick, Inc.) point out the design possibilities of the random and parallel patterns in which new Metropolitan "SCR Acoustile" is available.

Pacific Clay Product Increases Sales

Sales of Pacific Clay Products, Los Angeles, Calif. increased 18% while net income rose 29% for the first nine months of 1959 over the comparable period last year. President John D. Fredericks announced recently in an interim report to shareholders.

For the nine months ended Sept. 30, 1959, net sales totalled $8,648,941 compared with $7,352,610 for the like period of 1958. Net income totalled $1,107,063, equal to $1.72 per share based on 645,446 common shares outstanding on September 30, 1959. For the first nine months of 1958, net income was $859,687, equal to $1.33 a share on 645,543 common shares outstanding which are adjusted for the 25 per cent stock dividend paid on April 21, 1959.



Rocky Mountain SCPI Confab at Broadmoor

Brick & Tile executives from all parts of the Rocky Mountain area recently attended the second annual Region 12 SCPI convention at the Broadmoor Hotel in Colorado Springs, Colo. The speakers representing all facets of the industry presented their programs against the background of a make-believe television studio. Robert B. Taylor, director of the SCPI research foundation gave the audience an enlightening presentation on future products for use in brick and tile construction. He introduced the latest developments of l.w. brick products, prefabricated panels of brick, and tile, glazed acoustile that reportedly has acoustic properties, and yet the no-glazed structural tile. He also reported on the progress of many experimental projects.

A Look at

The Latest in Industry News

Summitville Tile Co. Adds Kiln

An Allied kiln is being put into operation at the Summitville (Ohio) Tile Co. plant.

The kiln will be used for the wide variety of quarry tile made at the plant as well as for acid brick.

New Quarry Tile Capacity at Murray Tile

An Allied kiln is being added to the Murray Tile Co., Cloveport, Ky., production. The kiln to be completed is at the Lewisport, Ky, plant.

Murray Tile makes both red and buff quarry tile as well as acid brick.

Interstate Brick Kiln Ready To Go

An Allied kiln at Interstate Brick Co., Salt Lake City, Utah is about to go under construction.

The plans for the kiln have been under consideration for some time and ground breaking is about to take place.

Adding Manufacturing Capacity at Richard Brick

Richards Brick Co., Edwardsville, Ill. is adding an Allied tunnel kiln to bolster capacity.

Plans for remodeling and expanding have been on the drawing boards for some time. The kiln is the first step in the program.

Kiln Under Construction at Holly Springs

Holly Springs (Miss.) Brick Co. is now building an Allied tunnel kiln. This new kiln is to add to the periodic kiln production at the plant. The tunnel kiln is the first for Holly Springs.

Allied Kiln for Hanford Brick Co.

Under construction at Hanford Brick & Tile Co., Burlington, N. C., is an Allied kiln. It is the first continuous kiln for the plant. Hanford Brick is well known for its fine red brick and its flash brick.

Lagootee Ind. Brick Co. has New Tunnel Kiln

In the remodeling program at the Lagootee, Ind., Brick Co., plant, the tunnel kiln was on high priority. An Ohio kiln was installed. Now that the kiln is in full and good operation, the remainder of the work will begin.

Second Drain Tile Kiln for Mich. Vit.

Michigan Vitrified Tile Co., Corunna, Mich., are now operating their second Ohio kiln. It went into operation in the middle of October. The addition of the second kiln gives the company additional capacity needed for the area. It was reported that losses are extremely low from the tunnel kilns.

Kiln at Brooklyn Brick Operating

The recently installed Ohio tunnel kiln at Brooklyn (Ind.) Brick Co. plant is now in full operation. Brooklyn Brick supply brick and tile to Indianapolis, Ind. and surrounding area markets.

Corbin Brick Co. Kiln Running Smoothly

The Corbin (Ky.) Brick Co. installed an Ohio tunnel kiln this summer and report that production through the kiln is highly satisfactory.

This is the first tunnel kiln for the company.

Hebron Brick Co. Adding Kiln

The Hebron Brick Co., Hebron, N. D. are installing their first Miller tunnel kiln. Work on the kiln is about 20% complete.

The tunnel kiln will add to the plant capacity.

Boren Clay Plan Expansion

Another kiln will be added at Pleasant Garden, N. C. This will be the fourth Miller kiln at the plant.

A definite date has not as yet been set up for breaking ground.

La Chance Brick Co. Lights New Kiln

The La Chance Brick Co., Gorham, Me. has just completed a Miller kiln which is now in production. This is the first tunnel kiln for the plant. The kiln will improve the product quality and increase volume of production.

Sumter Brick Plant Under Construction

Work is under way on the plant for the Eastern Brick and Tile Co., which is being ereceted on a site on Wedgefield Road, Sumter, S. C.

The Sumter County Board of Commissioners has agreed to maintain a 50-ft. roadway through the property.

It was originally intended to place the plant at another location, but it is understood that by changing, the company benefits from being able to have a 10-year contract for natural gas for kiln heating. Company officials said that only a one-year contract for gas would have been possible at the site earlier selected. Clay will be hauled from the first site to the plant, on the Wedgefield Road.

Builders Brick Plant a Showplace

It was reported that the new plant at Builders Brick Co., Seattle, Wash. is one of the finest in the country. The modern layout includes a Dressler tunnel kiln.

La Prairie Now Operating Second Tunnel Kiln

A second tunnel kiln has just been placed in operation at the La Prairie (Quebec) Brick Co. Additional dryers, grinding and storage was also added. Dressler built the kiln.

Cookville Completes Two Kilns

The La Prairie Brick Co. plant at Cookville, Toronto, Ontario, has just completed two Dressler kilns which are now in operation.

This plant was converted from periodic to tunnel kiln operations.

Continued on page 55

How many of these ALLIED FIRSTS can be found in your plant today?

Patented Freeway Transfer System — eliminates bothersome, often dangerous, depressed pits; helps keep production flowing smoothly, lowers labor costs.

Double-Track Waste-Heat Drier —conserves space, often reducing building costs; speeds up drying process.

Patented Side-Damper Control throughout the charging end of the kiln—regulates the flow of heat down through the tunnel, also the exhaust of gases from the kiln through any length of desired exhaust section.

Patented Longitudinal Flue System in the tunnel kiln preheat zone—assures proper temperature and excess air for oxidation, eliminates uneven localized heating.

Quick-Cooling System, patent applied for—positively drops the temperature to any desired temperature just beyond the fire zone, with uniform cooling from the center to the outside of the

ware setting. (Replaces earlier patented Allied Panel System still widely used.)

Cooling System regulating dampers at any location in the cooling end—brings outside air directly into the kiln beneath the ware, or indirect cooling-air behind the cooling wall, removes direct cooling-air from the kiln; utilizes heated air for drying or space heating.

Patented Combination Bottom Radiation, Side Muffle Tile —assures uniform temperature from bottom to top of cars in muffle kilns, preventing soft ware in lower areas.

Patented Insulating Brick Side-Car Seals (and new car-end seals, patent applied for) — protect kiln car frames from burning, and assure uniform firing of ware at ends of cars.

Technique for Flashing Brick in Tunnel Kilns —combines proper location for flashing burners with automatic time and pressure controls, assuring same desired type of flashing on subsequent production.

Automatic Firing Systems for tunnel kilns—permit automatic control of two or more zones which, with proper automatic burner hookup, are the accepted industry standard today.

Puller-Pusher Power Unit on transfer cars—pulls the kiln car rapidly off the transfer car into the kiln, then pushes the kiln cars through the kiln at scheduled rate.

Automatic Car Haulage System — moves cars under the off-bearing belt and down the kiln car tracks with simply a push of the knee (or any part of the body) at the hacker's location, and while still being set. May also push cars down the storage tract to the drier.

A Companion Haulage System can move cars down the return or unloading tracks and onto the transfer car. All cars, or any portion, may be moved at one time.

Timken Roller Bearings on kiln cars — first introduced in 1940, a great step forward in performance and reliability.

Yes, Allied Engineering has pioneered many of the technological advances that have made clayware production a *truly modern*, big-volume, low-unit-cost industry. And we're still at it today, developing further refinements in techniques and equipment to improve your operations, make your business more profitable.

When can we serve you *next?* In what way? For what products?

FERRO

Allied Division

FERRO CORPORATION

4150 EAST 56th STREET • CLEVELAND 5, OHIO

Furnace Heat Control

Independent control of each heating element in silicon carbide electric furnaces and kilns is provided by a new Multi-Circuit Auto-Transformer. Simplified furnace design and wiring, more uniform control and perfected zone heating control are among the engineering advantages built into the new transformer. The unit has a 10-KW power control system and features separate controls for 18 SiC elements, providing them with voltages from zero to 120 volts in 60 equal steps.

Ariel Davis Mfg. Co.

1/Circle on Reader's Service Coupon

H-W. Zircon

High purity zirconium silicate refractory called H-W ZIRCON brick. Available in a variety of standard sizes and shapes, H-W ZIRCON is used for paving glass tank bottoms and vulnerable parts of the superstructure above the glass line. The new zircon brick are impact pressed to produce uniform density, homogeneous texture, high compressive and transverse strength, and constancy of volume at temperatures ranging up to 2900°F. H-W ZIRCON brick reportedly have excellent resistance to thermal spalling and to severe fluxing conditions. The minute and homogeneous pore structure accounts for its low permeability and impregnation by molten glass in the bottom paving.

Harbison-Walker Refractories Co.

2/Circle on Reader's Service Coupon

Single Deck Step Screen

This is a 4′ x 10′ single deck step screen with electric heaters. The high speed vibration of the screen, combined with amplitudes large enough to handle heavy loads of oversize, permit operation of the screen at relatively low slope to insure maximum screening efficiency. The step is particularly useful in screening 4 mesh and finer when it is desired to remove the maximum possible amount of fines. The mechanical reliability of the Overstrom screen and simplicity of design, suits it well to applications in automated plants requiring continuous operation—reportedly without interruption from mechanical failures.

Overstrom & Sons.

3/Circle on Reader's Service Coupon

Optical Pyrometer "Optix"

This new model of our "OPTIX" Optical Pyrometer combines all mechanical and optical parts within a handy telescope-type housing.

This reliable and precise instrument is ideal for temperature control of furnaces and kilns in *ceramic industries, glass smelting, enameling, tile burning, sintering furnaces.* etc., as well as in *laboratories.*

Elliptical floating luminous index mark for luminosity comparison is

easily and quickly adjusted to disappear and the temperature is directly read on an 8″ long ring scale. Small spots can be controlled. For instance, at a distance of 3½ ft. an area of approximately only 3/16″ is covered.

The instrument is dust proof and rugged. It can be supplied with single, double and triple range for temperatures up to 5400°F. Dimensions 9 ¾″ long x 3″ dia.; weight 3 lbs.

Epic, Inc.

4/Circle on Reader's Service Coupon

Palletless Brick Handling

Special hydraulic brick clamp with which this Model W-18 Fork Lift Truck is equipped eliminates manual handling in loading and unloading trucks. Hydraulic power pulls load against rubber padded carriage face. Hydraulic accumulator assures constant pressure on the load. Bricks need not be palletized, but must be strapped to bind the load.

Gerlinger Carrier Company, subsidiary of Towmotor Corp.

5/Circle on Reader's Service Coupon

Dry Stylus Recording Thermometer

This thermometer can be used as a highly portable field service unit for recording time and temperature in auto, truck train, etc. Is small enough to be packed with goods being shipped and will record in any position. Uses a dry scriber. There is no ink to be affected by the weather conditions. The different time ranges are either 24-hour or seven day.

Pacific Transducer Corp.

6/Circle on Reader's Service Coupon

Brick Press Drive Motor

Two-speed heavy duty squirrel cage motor develops 50 hp at 900 rpm, 30 hp at 300 rpm. Characteristics and torque fitted to duty cycle of alternately pressing air from clay mix, then squeezing mix to brick form at high pressure. Specially designed for rigorous duty cycle, abrasive dust atmosphere of brick press service, motor is totally enclosed, force ventilated.

General Electric Co.

7/Circle on Reader's Service Coupon

Statement Required by the Act of August 24, 1912, as Amended by the Acts of March 3, 1933, and July 2, 1946 (Title 39, United States Code, Section 233) Showing the Ownership, Management and Circulation Of BRICK & CLAY RECORD published monthly at Chicago, Illinois for October 1, 1959.

1. The names and addresses of the publisher, editor, managing editor, and business managers are:

Names	Address
Publisher, Fred L. Steinhoff	Flossmoor, Illinois
Executive Editor, J. J. Svec	Berwyn, Illinois
Business Manager, Floyd M. Burdick	Elmhurst, Illinois

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.) Industrial Publications, Inc., Chicago, Illinois; Materials Handling Laboratories, Inc., Boston, Massachusetts; Maurice P. Driscoll, Oak Park, Illinois; Fred L. Steinhoff, Flossmoor, Illinois; John H. Van Deventer, Chicago, Illinois; John W. Parshall, Winnetka, Illinois; James M. Lange, Chicago, Illinois; J. J. Svec, Berwyn, Illinois; Frank J. Amstadter, Chicago, Illinois.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) . . . None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required from daily, weekly, semiweekly, and triweekly newspapers only.)

Sworn to and subscribed before me this 8th day of October, 1959

Maurice P. Driscoll, President

Karl H. Clarke, Notary Public

(Seal)

(My commission expires October 21, 1960)

Continued from page 51

Merry Contracts for New Kiln

Merry Bros. Brick Co., Augusta, Ga. will install another large Dressler kiln in the near future. The capacity added is said to be 100,000 brick production.

Southern Brick Co. Doubles Capacity

Joe Patrick reports the addition of his second tunnel kiln at Ninety Six, S. C. This Harrop kiln doubles the capacity of the plant.

Bickerstaff Brick Add Kiln

Bickerstaff Brick Co., Columbus, Ga. recently put into operation their second Harrop tunnel kiln, adding greatly to the production at that plant.

Dixie Puts Kiln in Operation

Dixie Brick Co., Columbus, Ga. has just put into operation a Harrop kiln which doubles the plant capacity. The original was built as recently as five years ago.

New Plant at Ragland, Ala.

The Ragland Brick plant is completely remodeling their operation. A new building has been purchased which houses the new Hendryx kiln, dryer, grinding plant, etc.

Alton Brick Co. Increasing Capacity

Additional work at the Alton Brick Co. plant in St. Louis will increase their capacity. A Hendryx kiln and more grinding equipment are being added.

Large Kiln At Henderson Clay

A 100,000 brick daily production kiln has now been placed in production at Henderson (Texas) Clay Brick Co. This Harrop Kiln is an addition to the other tunnel kiln.

New Kiln at Chattahoochee

Chattahoochee (Ga.) Brick Co. is expanding operations with their new Harrop kiln. It will go into operation in a few weeks.

Cherokee Brick Co. Building Tunnel Kiln

Under construction at the Raleigh, N. C. plant is a Harrop kiln. This kiln will replace several periodics and add to the capacity of the plant.

Jenkins Brick Completes New Plant

Jenkins Brick Co., Montgomery, Ala. has been operating its new plant for about a month. The shakedown operation of the Dressler kiln has proved successful and now operations are running well.

Acme Brick Expanding

Acme Brick Co., Fort Worth, Tex., pioneer Southwest clay products firm, is contemplating a plant expansion program to provide increased production throughout its system. Neill Boldrick, Acme president, has confirmed that Dwight Hendryx, brick company engineering firm, has been retained for surveys and recommendations on Acme properties, with an eye toward general expansion "in the future." Boldrick said the plans are being made in anticipation of a big year in construction in 1960. "All signs point to continued building growth throughout our marketing area," he said, "and our expansion plans will enable us to continue to provide the finest in service to the growing Southwest."

NEW!

FOR THE STRUCTURAL CLAY PRODUCTS INDUSTRY

Based on over 25 years experience in *DRY PRESSING* sound ware in large sections, shallow or deep, plain, cored or with blind holes, we now offer a fully automatic hydraulic *DRY PRESS* for the manufacture of the new Lightweight Clay Structural Block.

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... you get a ceramic plant designed for economical operation and quality product. Because ceramic plant specialists have the know-how and the proficiency to provide the complete, coordinated and mechanized plant package to manufacture your structural clay products from the receiving of your raw materials to the shipping floor of your finished product.

That is why it will pay you to consult engineers specializing in ceramic plant design and installation.

Tunnel Kiln

(above) Hendryx-designed, 280 foot tunnel kiln with three separately controlled firing zones and quenching and annealing zones, for burning buff face brick. Waste heat is salvaged for use in dryers.

Manufacturing Unit

(right) This unit, serving a tunnel brick kiln, extrudes, molds and cuts in a compact and efficiently arranged area, economical of plant floor space.

Setting Kiln Cars by "Lowervator"

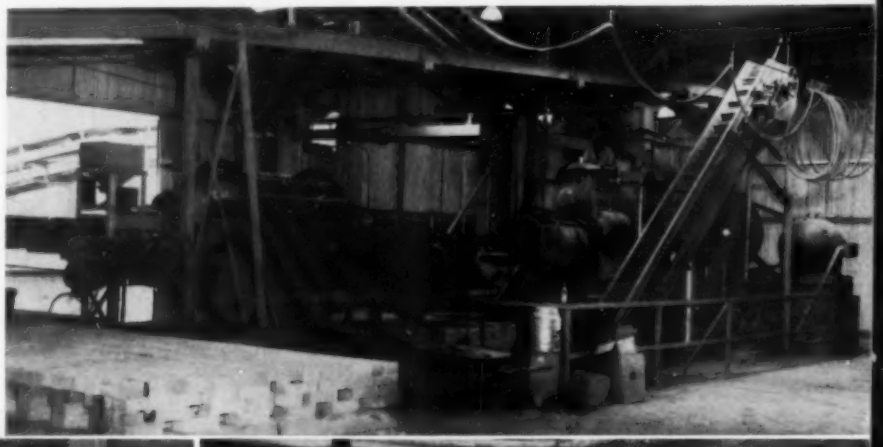
(below) Platform is lowered at slow, adjustable speed for uniform level setting. Eliminates stooping and lifting, increases setting speed 50%, cuts setting tracks and labor cost 33%. Cars are moved on, off and along tracks automatically.

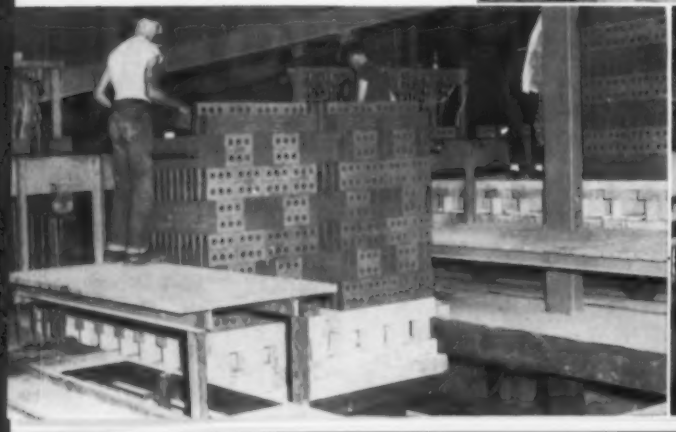
A Recently-built Plant

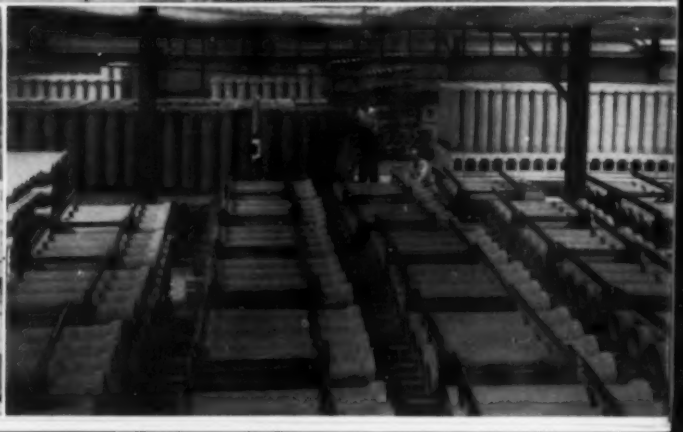
(lower right) Dryer racks of green sewer pipe in foreground; loaded kiln cars in background. Overhead are waste heat pipes from kiln to dryers.

HENDRYX
CERAMIC PLANT DESIGN

DWIGHT B. HENDRYX AND ASSOCIATES
6621 Darlington Road
PITTSBURGH 17, PA.







NEW HEAVY-DUTY BARBER-GREENE PORTABLES

Here's an all-new, heavy-duty portable conveyor line from Barber-Greene that's designed to handle sand, gravel, stone, cinders, chemicals, wet concrete, coal and other bulk materials at high capacity and lowest cost. Choose from a wide range of belt widths and lengths.

• **Maximum portability**—Sturdy V-type truck... single oversize pneumatic tires . . . wheels turn on tapered roller bearings. Convenient towing hitch allows unit to be towed over highway or readily moved from one yard location to another.

• **Rugged construction**—Sturdy Warren-type truss design gives maximum strength with minimum weight . . . unit handles large lumps and heavy loads in severest applications with a minimum of maintenance.

• **Easy alteration**—You can lengthen, shorten, alter to meet changing conditions quickly—at any time. Parts are readily available.

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Model PA-70 with Torque Arm Drive
Model PB-70 with V-Belt Drive
Model PC-70 with Lineshaft Drive

• **A complete line of portables**—Long, short, light and heavy-duty Barber-Greene Portable Conveyors, plus all conveyor accessories needed, are available to simplify and speed your handling of all bulk materials.

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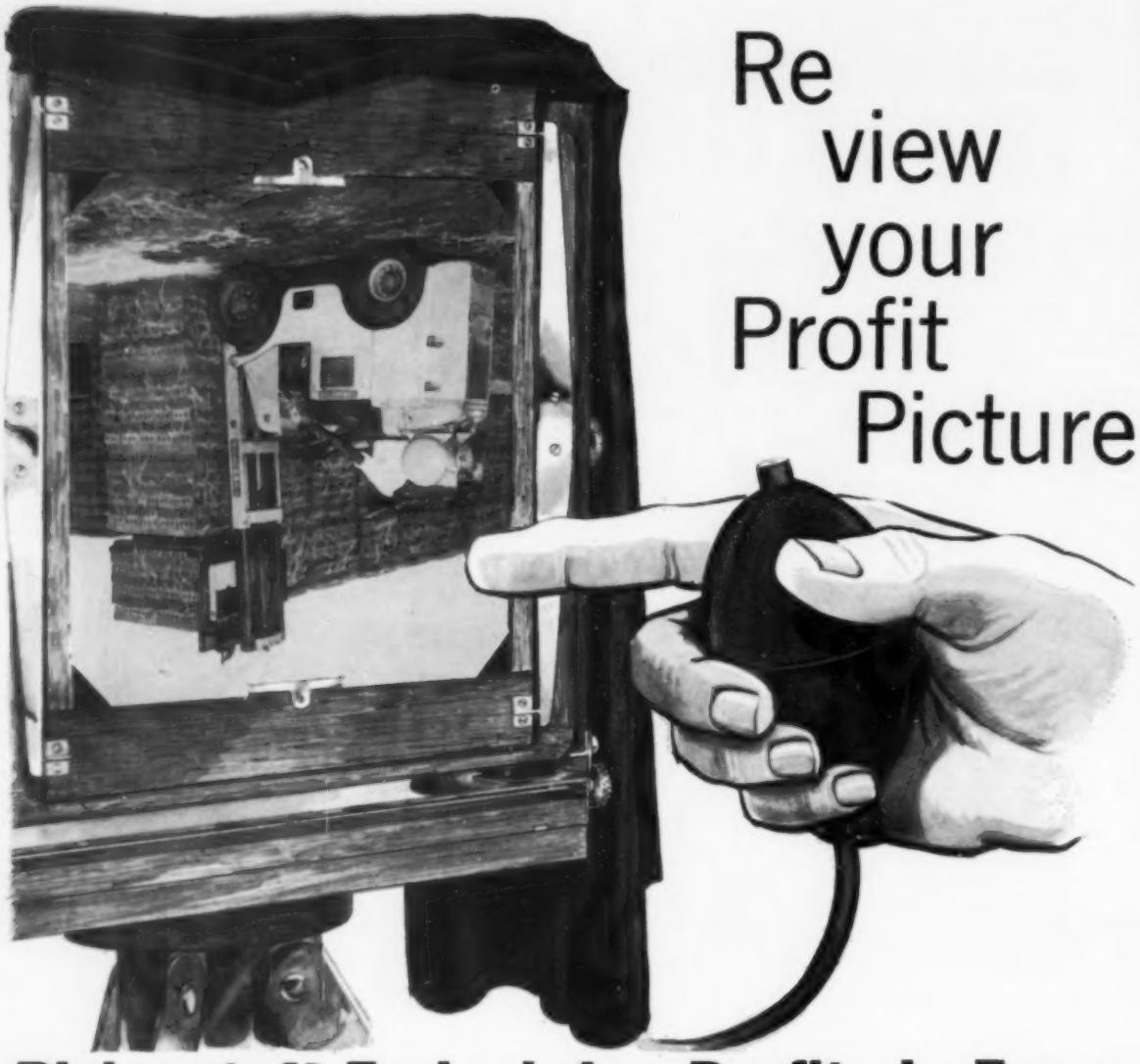

Review your Profit Picture

Bickerstaff Forks bring Profits in Focus

Picture your own brick handling with and without a Bickerstaff Fork. It doesn't take much figuring to see how a Bickerstaff Fork will pay for itself by reducing labor costs. Eliminating pallets and strapping. Increasing kiln turnover. Reducing loading and unloading time.

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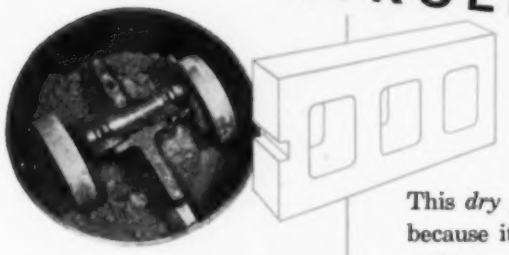
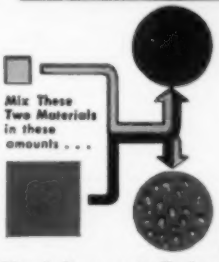


Exclusive kneading, smearing, spatulate action blends quickly, thoroughly. Agglomerates are broken up. Moisture is distributed evenly. Bottom discharge is fast, clean and automatic.

HERE'S HOW MIX-MULLER WORKS


A
And Get This
even texture, thorough moisture dispersion
Mix These Two Materials in these amounts . . .
Not This
"Hot spots" balling, uneven and wasteful dispersion.
B

Here's how *controlled mulling* works:

Diagram shows comparative results of blending a minute amount of one material with large amount of another material in (A) MIX-MULLER and (B) conventional mixer. Savings in raw material, reprocessing time and quality of finished product are the outstanding *rewards* of mulling your product.

This *dry press* block is quick and easy to produce and control because it's blended in a Simpson *Mix-Muller* at less than 5% moisture and then pressed out in a die. No drying time is needed. *Controlled dispersion* of moisture, clay and binders is the ingredient that insures uniform accuracy, uniform density and uniform strength. It's the ingredient which has made Mix-Muller the standard of the quality-conscious refractories industry for over twenty years.

Why settle for less? There's an acknowledged market for this tough, dense, accurate product of facing unit quality . . . one that offers promise of new, broader markets for you and a refreshing bargaining position for your salesmen.

The Handbook on Mulling provides full details on why more and more structural clay products are being produced in the Simpson Mix-Muller. Write:

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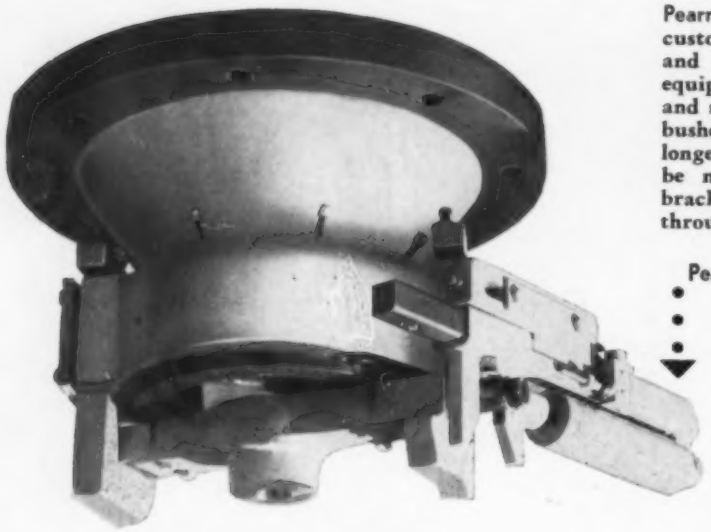
PEARNE AND LACY

SEWER PIPE DIES-LOCKERS AND OILERS



Pearne and Lacy Sewer Pipe Dies are made to customers' specifications as to size and shape and are of high grade cast iron. Dies come equipped with standard or roller type hooks and steel former arms. Die body and cores are bushed with replaceable bushings to insure longer life. The socket portion of the die can be made replaceable if desired. Die locker brackets are included. Die sizes range from 4" through 42".

- Pearne and Lacy Die Lockers are self contained units specially designed for high speed locking and un-locking. Available for either hydraulic or air operation. Easily replaced with die changes.

Pearne and Lacy Automatic Die Oiler is specifically designed for die and former oiling on sewer pipe presses. This is a small compact unit ready for immediate use. Once installed, your die oiling problems are over. The oil is ejected under high pressure through a special nozzle. At no time is air mixed with the oil, consequently no oil fog is present. There is an adjustable volume control for the exact amount of oil needed. It is automatic and includes provisions for manual control.

Write for details on the many new labor saving features in automatic handling and finishing equipment.

Engineers and Manufacturers of Automatic Handling and Finishing Equipment for the Ceramic Industry.

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PEARNE AND LACY INC. MACHINE COMPANY

Working Together to Make The 60's Belong to Clay Products

60's Progress thru Unity

Unity—the Price of Progress in the 60's

The brick and tile industry stands today at a crossroads. Behind it lies a long and honorable history of service to the construction industry and the nation, and profits for its members. Ahead lies tomorrow, the decade of the "sizzling sixties", with its fair promise for the worthy and its certain oblivion for the wear, one thing is certain, we'll all start down that road to tomorrow, and we won't travel alone.

We'll have company, plenty of it, on that road through the 60's. The company of giants, ravenous appetites hunger after the same fruits that we of the clay products industry seek. We've already been aware of their presence, and there remains little doubt as to their purpose. Yes, our traveling companions on the road to tomorrow will be the giants of wood, of steel, of aluminum, of plastics, several of whose individual strengths and resources are many times that of the combined plants of the entire brick industry.

Lush as the business prospects for the next decade are, it would be no less than fatal to allow the favorable business indicators to lull us into a sense of complacency.

Historically and presently the brick industry is made up of many small producers, as measured against the size and production volume of those with whom we compete. In this "fact of life" about the clay products business, lies the source of our collective hopes and strengths.

To meet the challenges and the opportunities of the 60's there is but one effective answer—UNITY. Our sole hope lies in acting as a collective, organized group to meet the demands of the market for economical and improved products, more adequate long-term and short-term research and vastly greater and more effective advertising, promotion, merchandising and education.

To this obvious need for unity is added another compelling requirement. It is this. The time for unified action is now—today. We are surfeited with good intentions, smugness and self-satisfaction. But these will not pay off in tomorrow's marketplace. Unity in the form of personal service and the collective pooling of financial contributions on the part of everyone in the industry will pay off for all.

The instrument for unified action is at hand. It is a vital, growing and proven source of industry achievement, now completing its 25th year of service. On the occasion of the first quarter century of service of Structural Clay Products Institute, we of BRICK & CLAY RECORD believe it is time to take an inventory of ourselves as an industry and the part that SCPI, created by our own industry, has played in the past, and can and must play in the years ahead.

The choice for the 60's is ours to make. Will it be "hot brick" or "cold kilns and rusting machinery"?

It's up to you!

MEMO TO: Directors, Partners, and Management of structural clay products plants

SUBJECT: What's in this issue of BRICK & CLAY RECORD for you

Especially prepared for you, the pages that follow represent a thoroughly researched attempt to look into your own future business needs and opportunities by examining the past and the present, and relating them to the industry's future potential.

That there is nothing as permanent as change is well indicated by the examination of the past and comparing it with the present. We at BRICK & CLAY RECORD after several decades of observing the "goings on" in the industry and with a detached viewpoint, believe that there can be wider changes in the next decade and that they can come at a much more accelerated pace.

In the following sections, we point out what must be done to meet the challenge of the 60's. That we are on the threshold of a fascinating decade, we are perhaps all in agreement. How best to arm ourselves to take full advantage of the sizzling 60's is a matter of opinion. We have here clarified the problems and made some suggestions. Each reader is invited to comment upon our version or expound on his.

You will read commentary on the following subjects:

1) How each step in the history of the industry pointed to unity—small plants merging into large plants—fewer but bigger producers.
2) How the industry unified to develop new clay products which will take over and expand the old clay products' markets.
3) What lies ahead as potential markets for clay products and how the business can expand fourfold through unity.
4) How promotion could be expanded by unity and what it should do to keep pace with our competitors.
5) How changes in manufacturing processes and equipment will come about: the effects of lighter and larger clay products on plant equipment.
6) How the dreamers in research, who are really not dreamers but forerunners of things to come, —make their dreams come true—a product of unity.
7) How SCPI was born and all the trials and tribulations it encountered in growing up for unity.
8) How true and adequate promotion and sales are moving forces that are needed for unity and success.
9) The House on 18th St.; the heart throb of unity in the industry and the organization.
10) How Douglas Whitlock struggled to gain unity and still seeks more.
11) SCPI members past and present who support unity.
12) The big pay off—where the industry can expand to be over four times its present size.
13) BRICK & CLAY RECORD enumerates what the needs of the industry are which must be met to gain unity and win the 60's for clay products.
14) How this can be attained—What to do about it.

Progress in the 60's . . .

Guide Lines from Clay Products History

Brickmaking came to America from Europe in earliest colonial times. The English and Dutch were the brickmakers of Europe so it was quite natural that these groups would turn to the manufacture of this common building material in their new land. Some references speak of brick being imported from Europe in colonial times, but such reports can be largely discounted—transportation in those days was a great deal more expensive, relatively speaking, than it is today.

Raw materials for the handmade soft mud brick and wood for fuel were plentiful in those days. As a matter of fact, early buildings along the Eastern Seaboard were largely self-contained: They were often made from clay excavated from the basement, fired with wood cleared from the site and laid in lime mortar made from oyster shell obtained in the nearest estuary. It was, incidentally, the custom of the colonial building contractor to make his own brick.

This method of manufacture remained for many years: A horse turning an elementary pug mill, a man with his sand struck mold box and a wood-fired scove kiln. So went the brick industry in America until the time of the Civil War.

A surging population following the Civil War created a need for ever greater quantities of all building materials. One answer to the problem was the soft mud brick machine, which allowed cheaper and faster production. But, for the first time, the equipment needed to make brick could not be loaded into a horse-drawn wagon and moved to a new site. A new factor crept into the economy of the brick business: Transportation. The plant could not move to the building site, so the brick had to be sent there. The cost of transporting the product might have cancelled the economies of mass production were it not for another new industrial giant, the railroads.

Increased Sales Range

The sharp reduction in the cost of freight resulting from the development of the railroads greatly increased the sales range of the individual plant. This was true even though we tend to think of brick as not being a transportable commodity. This combination of cheaper transportation and improved production methods gave a competitive advantage to the more aggressive producer.

Sooner or later this would weed out the small, local maker. But it was destined to take a long time. Consider these figures: In 1879, more than 10 years after the Civil War, there were 1600 brick plants in the United States. They worked an average of 11 persons per plant and turned out slightly under 1.5 billion brick among them. By 1890 there were 5,830 brick plants in the country and their individual production had increased until the average plant produced something like 1.7 million brick. Total production was 10 billion brick.

During this period productivity per man remained fairly constant. But strong forces were at work under the surface that would usher in the industry's golden age.

The dry press and the stiff mud processes were being developed. The first of these was used to produce

the initial "face brick." (This was the origin of the term "press brick," which is still used by many). The uniform size and smooth texture of face brick was revolutionary in a market based on soft mud brick. The auger machine made possible production of structural tile on a practical basis for the first time.

But the most far-reaching effect of these two innovations was to intensify the push toward bigger and fewer producing units. The typical soft mud plant was simple and small. The auger, however, was an expensive machine. It had tremendous capacity and high overhead cost which could best be met by producing more and more in each location.

Industry Matures

The brick industry really matured in the 30-year period between 1890 and 1920. From the 5800 plants in 1890, the number decreased to fewer than 4200 in 1910. Despite the reduction in the number of plants, however, production rose from 10 billion to 15 billion brick during the period.

This decline in the number of plants continued from 1910 at an accelerated pace, but the rate of production in the remaining plants increased just about enough to maintain steady production. By 1925, only 1500 plants remained, but production remained at the 15 billion figure of 1910. The average production per plant in 1925 was about 10 million brick per year.

We know the majority of the new plants were replacements because the changing composition of the market was beyond the capabilities of the old plants. Soft mud common brick could not compete pricewise with stiff mud common or even dry press common in most producing areas. The old plants failed. Their demise was hastened by the appearance of structural tile, made possible by the stiff mud process, which hurled a challenge at all existing types of backup materials. The tile unit was bigger and less dense, giving it job site economies which more than offset its higher price per ton.

The competition was made even more lopsided by the early entrance of large progressive operators in tile production. These operators ran their businesses in ways calculated to take utmost advantage of the unique properties of the new product.

Face Brick Appears

Face brick also made its presence felt. Here is a product which did not exist in 1890, but by 1925 accounted for 3 billion units a year. These brick were made in new plants, plants which did not exist before 1900.

The trend toward fewer plants and bigger plants was given another boost by the depression of the 30's. The bottom dropped out of production during the worst years and only those plants with the best conditions of production and top notch managers were able to survive these dark years. By 1935 the number of brick plants still replying to questionnaires had dropped to 700. In 45 years the number of plants had fallen from 5800 to 700, a drop of 88%.

During these years other important manufacturing developments took place. The tunnel kiln cut fuel, time and labor costs. Control instruments insured more uniform ware and reduced losses. Material handling equipment came into much greater use. Mechanization increased. New methods were introduced.

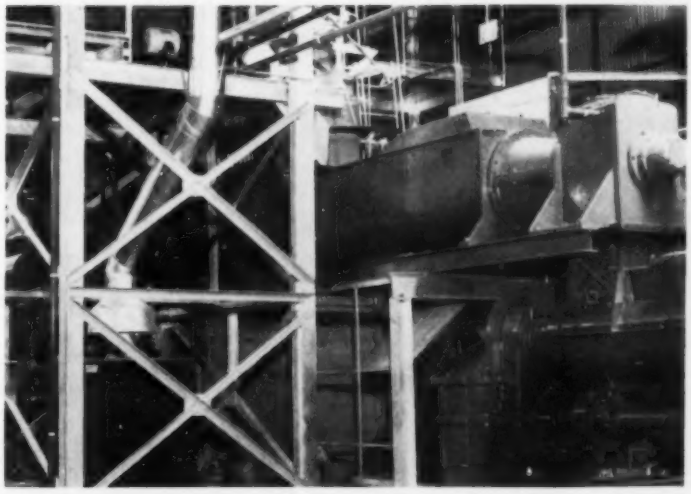
Fortunes Made in Hard Years

Surprisingly, there were vast fortunes made during these hard years in the brick business, fortunes based on new techniques, modern plants and enlightened management. Anyone who will look back on this period with an open mind can learn much from it.

The sum total of the early 30's was an acceptance on the part of the public of structural clay products for facing and the flowering of structural glazed tile as a full-fledged building material. Plants generally producing tile and common brick before 1929 were converted to these more acceptable products and the acceptance of our "new" products in the market was the one factor that maintained production at the recorded level.

60's Progress thru Unity

Looking back on history, it becomes clear that progress was made throughout the early years by having fewer but bigger plants. It enabled more mechanization for more production and greater profit. From greater profits come more promotion and in turn greater sales. From this we learn a lesson for the 60's—to seek greater mechanization and pool our extra profits in a team promotion effort. In unity indeed is strength.



From mule drawn pugging to modern, fully automatic pugmill exemplifies progress in less than half a century.

Progress in the 60's . . .

New Materials & Methods Hold Vast Promise

The past century has seen many changes in the structual clay products industry, changes which either directly or indirectly affect the lives of all of us connected with this vibrant industry.

Companies unwilling or unable to cope with these changes have fallen by the wayside and new operators have arisen in their place. As plants became larger, greater operating economics are effected.

The industry has several trends in design just now beginning which promise to do more to lower the wall cost of fired masonry materials than any yet experienced. These new developments promise to bring about unprecedented acceptance of structual clay products.

Today the brick and tile industry is offering builders and designers colors, sizes, and surface effects that were not even dreamed of a few short years ago. Plants are developing new colors and textures by the dozen and are finding a pleased and appreciative audience. Glazes, engobe and colored sands have been offered for many years but on a limited scale. Brick and Tile so made was hard to buy. As more and more plants enter into this fascinating business of surface treatment, and the total sales effort devoted to specialties increases, we can expect a greater percentage of our sales to be in these higher profit divisions.

System Accepted

Another development that augers well for us is the wide acceptance of the SCR Masonry Process by large organized groups. The System worked out and refined by the well-known Structural Clay Products Research Foundation at Geneva, Ill., is certainly one the first improvements in bricklaying technique since the construction of the pyramids. While there were elevators to put the brick on the scaffold and machines to mix the mortar, bricklaying was still a job that had to be done under poor, antiquated working conditions, which closely resembled those of the dark ages. The general adoption of the system will certainly ease the bricklayer's task and should thusly reduce the relative cost of masonry construction. Today the adoption of this method is well started and needs only continued encouragement and support to reach fulfillment.

Packaging, the manufacturer's own contribution to more economical job site conditions has also created quite an impact in the current market. It, too, has made giant strides in some areas while lagging behind in others. If the definition of packaging is broadened to include all materials, handled as a cube, strapped or unstrapped, it is quite surprising to see how far the practice has progressed in a short period of time. However, present unpackaged shipments still leave a large potential savings of building cost if methods can be developed to overcome the difficulties which have temporarily stalled many producers in those areas.

Progress thru Unity

Most of the products mentioned here are the result of cooperative efforts. Much has been accomplished in a very short space of time. Another lesson can be learned from this for the 60's. If cooperation works in developing products, it should work equally well in all other phases of business such as sales promotion-advertising-engineering, etc. The key to progress in the 60's has got to be greater unity in all industry efforts.

Two More Developments

The Research Foundation is also responsible for two strong developments which so far have met with only limited commercial appeal and application. The first, panelization, was developed to make brick competitive with metal panels. In turn panelization has led to the second major development, namely utilization of the load-bearing properties of fired clay into a structual panel. The panel itself, is a handsome, useful unit. Built into beams and other structual members it promises to offer outstanding advantages to building designers. If allowed to develop, these two ideas can have a twofold effect on the structural clay industry. One, the amount of our material used in the average high rise building will increase and two, the material that we sell will be worth much more to the buyer on a cents per pound basis. Our percentage of the building dollar should subsequently increase quite rapidly.

The most important single idea that the industry has ever had to cope with is less than 10 years old. Commercial production is less than two years old. This idea is the clay-bonded lightweight clay aggregate product. Whether it is referred to as brick, block or tile, the principle is the same.

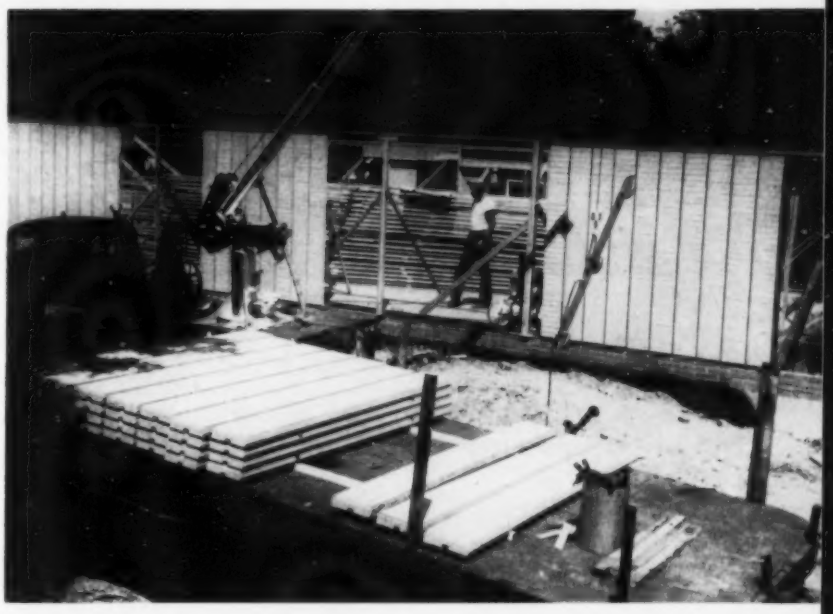
The final outcome of this development could change the industry even more than the stiff mud extrusion did some 50 years ago or even more than the advent of the auger machine and the tunnel kiln combined. Apparently the clay-bonded aggregate unit can be

made as big as desired. Its density will be half or less of our standard products. It can be dried in perhaps 1/30th of the time required for conventional clay bodies. Firing can be cut to six hours for 8 x 8 x 16 inch units, and even less for smaller pieces. It has all the advantages of any fired clay body, simply because it is a fired clay body. Furthermore it is extremely accurate in size and size tolerances. The clay-bonded unit will be produced in automated plants with production costs unbelievably low. Fuel requirements will be lower and recovery of first grade ware will be higher.

Change Regular Products

The clay-bonded aggregate idea should not only win back markets hurt by competition but will change the regular products that we are making today. The list of new and even experimentally tested ideas does not stop with those mentioned above, but continues with reinforced beams, prestressed units and new ideas in manufacturing that cannot help but enhance the use of clay masonry in construction.

Thousands of dollars are being spent to develop techniques for the application of the idea to individual situations. Some of these situations are inside the present industry and some are outside. In any event a potent new factor has been added to the structural clay products industry and for the alert, progressively managed companies, the horizons are unlimited.



"SCR insulated cavity wall" house under construction; "SCR building panels" being used in the erection of a prefabricated masonry home; "SCR brick" used in the construction of a solid brick home.

Progress in the 60's . . .

The Building Pie Gets Bigger And Brick Can Have a Bigger Slice

Two factors shape the future of the structural clay products industry. One is the general level of construction activity in the United States. The second is the depth to which we penetrate the construction market. We cannot do too much about the total building market, but we certainly can aim high in our penetration of the market.

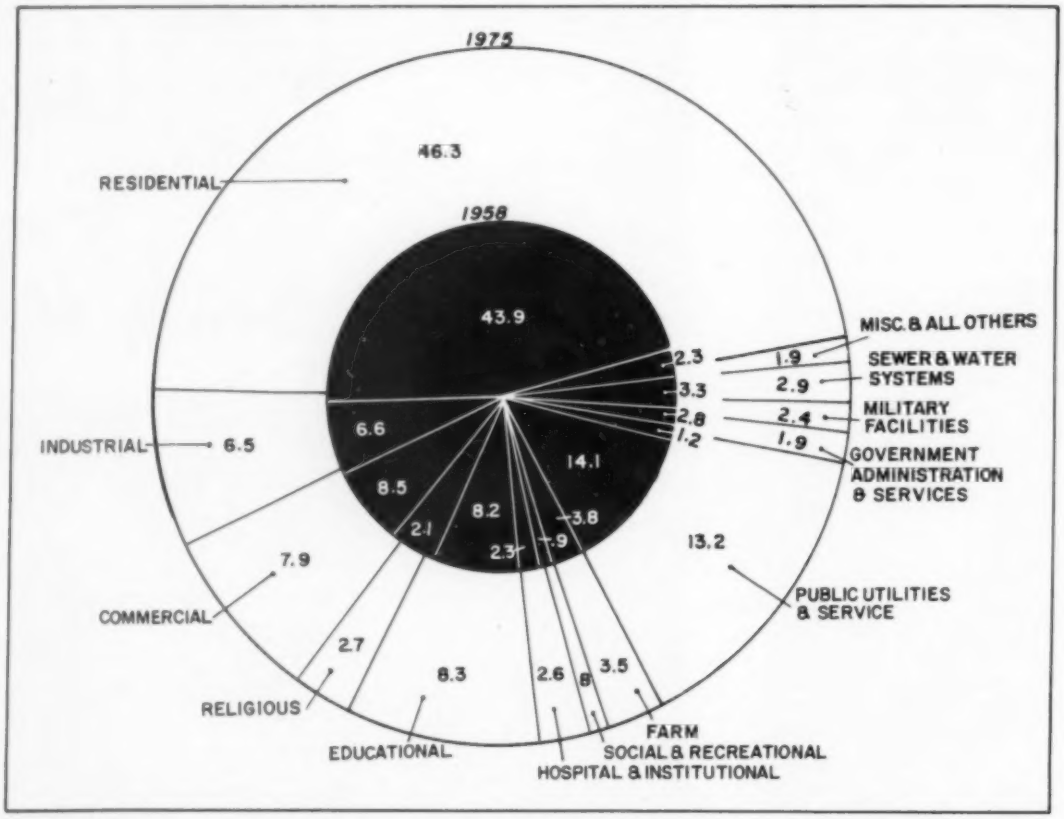
This construction market is divided into several distinct divisions. Some of these divisions are all-important to the welfare of the structural clay products industry and other affect us little or not at all.

The two major divisions are nonresidential and residential. The first is a broad classification and includes such diversified structures as factories, warehouses, hospitals, commercial buildings, office buildings, public buildings and churches.

Fortunately, the economic growth of the United States seems to favor those types of nonresidential buildings that utilize masonry products very heavily and in those areas where the industry has been able to remain competitive.

Schools, probably the largest users of brick outside of residential construction, have been built in quantity during the past 15 years. This construction program has been made necessary by the rapid growth in the number of school age children and additionally by the mobility of the population which tends to overload the facilities in some areas while leaving others relatively untouched.

Schools will continue to be built, probably in volume even exceeding that of the past decade. Classroom requirements projected on the basis of potential school age population will be high. For example, population in the 5-14 age bracket numbers slightly more than 36 million today. In 1970 this group will exceed 42 million, if the birth rate of the 1955-57 is maintained. This same projection gives a 5-to-14 population of 53 million in 1980, so it is easy to see that school construction will continue to be an important part of the total construction market. And schools have



The 1958 business pie of $42.6 billion should be $107 billion by 1975. The percentages in the pie indicate the division of business both in 1958 and 1975.

60's Progress thru Unity

The 60's look big for the building industry. The tide is running, but we cannot expect that alone to carry us to success. We must do many things together to make the 60's belong to clay products. If we put forth our maximum efforts and realize our potential, this industry could be more than four times its present size, producing 40-50 billion brick equivalents.

1959 is a good example of progress and enthusiasm. At this very moment, the reports on the industry indicate that 1959 will be the second biggest year for the industry since 1925. It will be 20% better than 1958. Indicating the optimism in the industry, 10 new plants are under construction and on the drawing board. With greater industry cooperation throughout the 60's, the same story could be repeated year after year after year.

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been one of the strongholds for brick sales for many years.

The projection of high school population, age 13 to 17, from the present time to 1970 and 1980, shows an even greater percentage of increase, from 13.4 million to 17 million and then to 22 million. The industry must be jealous of its almost 100% penetration into this area of construction and be sure that superiority of brick construction is maintained over all competing methods.

In the area of school construction, long term costs have a greater weight in the final selection of any material than in other fields. The average school board has no money to waste; it has professional advice as to the value and cost of all materials used, and for the most part is sincere in the selection of those materials that will return the lowest per pupil costs over a long period of time. For this reason we must be sure our competitors do not change the conditions so as to allow them to take any significant portion of this market.

Other types of public buildings are also large users of our products. Hospitals, assembly halls and government buildings, local and federal, are users of brick and tile. In these areas the industry is somewhat more vulnerable to inroads as the actual costs of construction can sometimes be made subordinate to community pride or individual caprice. However, a strong program directed at this segment of our construction market would be a minimum condition to retain our sales position in the area of public building.

This group of buildings can be expected to continue as a strong segment in the construction market as the total population continues to increase over the next 20 years. The expected increase in population from 180 million to 230 million will add to the burden of all governments, local, state and federal. With 50 million more people in the country requiring governmental services, more facilities will be required to main the present efficient level.

When it is realized that many of the present structures used by governmental bodies are old, obsolete and have long since outlived their usefulness, it can readily be seen that a big backlog of construction for this kind of building exists. When this is added to the pressures induced by the increase in population and the yearly improvement in the American standard of living, the potential is really tremendous.

Big Market Residential

The really big market for brick, however, has always been residential construction. Sixty-five per cent of all brick made in the U. S. today finds its way into housing. Fortunately, this market is growing, too, and is capable of absorbing many additional millions of brick.

Consider this: Only a little more than 39% of all residential construction in the United States uses brick at the present time. Still, even this partial penetration has been enough to boost the sales of face brick to new levels. And, new housing starts are increasing, offering an increasing market even if the 39% penetration figure remains constant. If the housing market gains only a moderate amount during the next 10 years, it is likely to add 30 to 40% to the total market for exterior construction materials. An increase is certainly indicated by the growing population and the subsequent increase in family formations, as well as by the rising standard of living and the annual increase in the gross national product.

Housing Top Priority

Since the housing industry has become our largest single market, and one which promises future growth, it should receive high priority in our promotion and sales program. The competitors, some with giant individual budgets exceeding our combined industry outlay, will not allow us to rest on our laurels. They will exploit every weakness we show and will limit our sales to the best of their abilities.

The growing market is there, but it is not going to belong to the brick industry unless the industry is willing to make an investment in its own future. This means an investment in research, to bring the developments of the past 20 years to their ultimate fruition.

It also means an investment in "service" to the consumer of our product. Too many times and in too many places brick are hard and inconvenient to buy. Information on their use is not available to the casual seeker. The industry must correct this fault if all areas of the country are going to use our product in worthwhile quantities—today, some areas have practically reached the saturation point in the use of brick in housing, while other areas are practically untouched by brick house construction.

We have the product—let's push it.

Progress in the 60's . . .

60's Progress thru Unity

Great Industries Improved Processes,

Efficient plant operation will go a long way toward assuring the success which should come to the clay industry in the 60's. In general, it might be said that the plants will produce clay products at a much higher rate. Therefore, the investment in the plant per ton daily production will probably be lower than it is today. However, if more of the processes are mechanized the ratio will increase, but man hours per ton will decrease.

Clay products will move through our plants at a much more rapid rate because of chemicals which help drying and firing, and prefirng, which reduces the time necessary for drying and firing. More use will be made of chemicals to aid drying, encourage burnout of carbon, lower fusion temperatures. Lightweight aggregate will probably be an ingredient of all clay products.

Many new chemicals and preparations, such as colors and frits for glazing, will come more strongly into the picture. Surface treatments are a must; these chemicals will not only improve processing but will get us a better unit price for our products.

Because speed will be a factor in production, much of the machinery throughout the plant will have to be modified. As new products are developed, new machinery will be added. For instance, we have already added spray guns, mixers and ball mills for the glazing process. We have added feeders for chemicals. One of the biggest equipment investments the industry has made in recent years has been the addition of complete lightweight aggregate manufacturing plants.

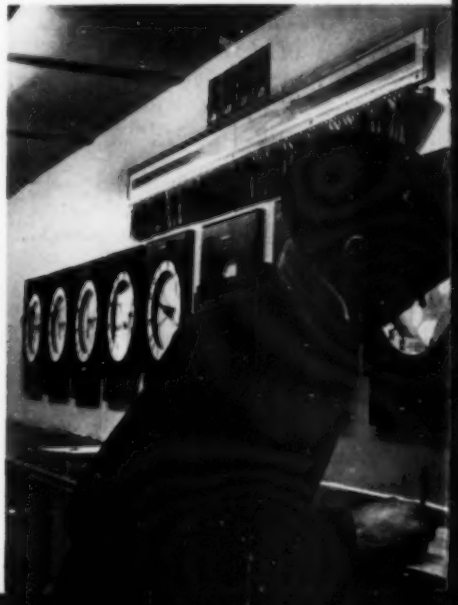
The evolution which continues to take place in the industry begins right in the clay pit. In the past 10 years we have seen new equipment take over the digging of the clay. World War II has taught our industry that you can dig clay in many ways and under certain circumstances some methods are faster than others. As a result, many of the industry's clay pits have a new look.

Just as new machinery has taken over the winning of the clay in the pit, so, too, we can already see new types of equipment taking over some of the processing of the clay. Crushing, grinding, classifying are no longer done by a single type of machine; new machines adapted from chemical processing are coming into the picture.

As previously pointed out, new products are going to require great modifications of our forming machinery. Because these products will probably be made at a much greater rate of speed; presses, extruders and

The clay pit has experienced new methods of material winning and handling.

Firing brick and tile is rapidly becoming a



Never Stop Growing; Equipment, Hold Key

The brick and tile industry lends itself readily to automation. This has been demonstrated in several modernization applications. The combination tunnel kiln and dryer is an example. As the 60's unfold, there will be more and more combining of processes which will eventually result in a completely automated plant. With prefired and lightweight aggregate additions to the raw batch, it is conceivable that a plant will evolve which will need only a few attendants to watch over the operation of machines.

other types of formers will have to keep pace. Forming, as well as drying and firing, must be accurate and certain, because as higher product quality and higher manufacturing costs develop, losses must be minimized if we are to make a profit.

Only well designed machinery can prevent these losses. Much of the accuracy of our product will depend on dies, and many of the companies who have been interested in dies for rubber, plastics and chemicals are now taking a look at the brick industry.

We look for vast improvements in the tunnel kiln firing process. The tunnel kiln will have controls improved beyond our conception today. Kiln air supply may be preheated and volume of air controlled to the burning operation. Control instruments will be more accurate. Burners will be different and certainly the kiln setting will have to be altered to conform with increased speed of firing.

It has already been suggested that because of some of the products which might be made in six hours or less from clay to finished product, firing may be done on heat-resistant belts and the tunnel kiln thereby take on a new shape.

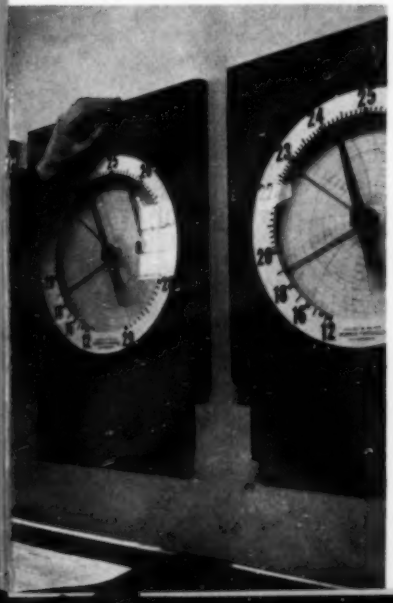
We have already been exposed to several attempts to develop automatic off-bearing. One plant is experimenting on a partial step toward automatic off-bearing which holds promise. This process will most likely be one of those which will be fully automated before the 60's are over.

Other parts of the plant that will get attention are raw material storage, fired material storage and possibly any intermediary storage, such as between drying and firing and between forming and drying.

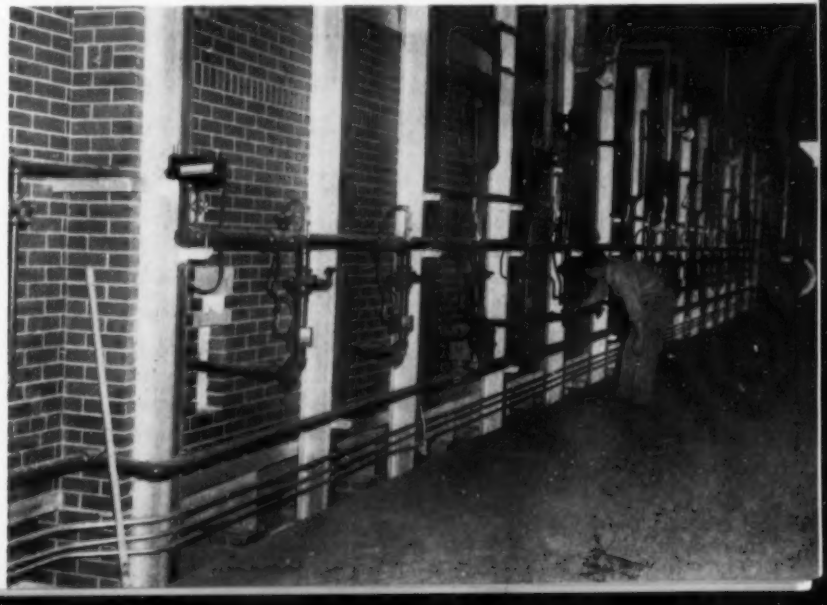
Packaging is already a regular process in almost every plant. This will continue to develop further and become more automatic. With lighter products, a new look will have to be taken at the entire process of packaging. This, too, involves delivery by truck and rail. Lighter products may be hauled farther, lighter products may take larger conveyances; the distance of haulage may be much greater with the lighter but bigger loads.

Look for the 60's, too, to come up with more new ideas than we have seen in the present decade, itself most productive of new developments.

precision operation under careful conditions.



The modern tunnel kiln has changed the brickyard to a brick manufacturing plant.



Progress in the 60's . . .

They Said It Couldn't Be Done But Research Did It—Can Do More

By R. B. Taylor, Director, Structural Clay Products Research Foundation

Today we must think of two future periods . . . . the immediate and the long range. For the immediate future we must continue to expand and integrate the fruits of research. The job is a tremendous one—not easy—not necessarily as fast as everyone would like . . . . but it must and can be done.

Then we must look beyond into the more distant future and try to see what lies ahead. No matter how one tries to look beyond the present . . . . it is difficult to go beyond major trends. Despite the difficulties, such looking ahead can do much to guide business, research and other activities.

This type of activity has borne much fruit in many industries.

Many modern industries, even old ones, admit that 75% of their current sales are derived from products not in existence 10-15 years ago. And when some of today's most successful products were first conceived, skeptics said they wouldn't work, would cost too much, there isn't any market! But some one with *a dream of a need, a faith in accomplishment, made it work, made it cost less* or *made it worth more, developed a market, built a new industry.*

The atom bomb is only 15 years old, and only a dream in a few minds 20 years ago. As late as 10 years ago the harnessing of the fusion of hydrogen was deemed impossible by many, but the "H" bomb was exploded 4 years later.

Yesterday, glass was only good for bottles and windows. Today, it is used for textiles, plumbing, masonry units, with plastics for boats and cars. Someone had a dream . . . . made it come true!

Yesterday, Jules Verne verbally sailed an impossible submarine around the world in 80 days . . . . a myth, a dream. Today, a United States submarine could cruise around the world in 40 days without surfacing . . . . another dream come true.

Today almost anything of a physical or chemical nature can be accomplished through modern research so long as we do not violate the fundamental physical laws of nature. All it takes is the skilled setting of goals and objectives, dedicated seeking after necessary facts, and their application to the problems to be solved.

In the case of research for specific lines of business or industry, it is of course necessary to have a balanced program that feeds and nurtures current needs, plans and develops the products for next year. Yet it should also be working faithfully on the needs of 5-10-15 years hence, even though at the moment some might think both the goals and their solution to be impractical.

So, today, as we look at Structural Clay we see a brick . . . . a piece of tile . . . . a fresco of terra cotta. It is what we work with today. Tomorrow they might be unimportant as such, for that clay from which they are made can be molded and burned as facilely as man's mind wishes to process it or design with it. Today, we pile one little unit on another in the wall and they stay in place because they are heavy, and mortar fills in their size variations. Tomorrow they can be big and light and accurate with new "mortars" as strong as

Here Are Some SCPRF Research Accomplishments

This partial list of SCPRF accomplishments is indicative of the work tempo in research. There are many more projects underway which for the present are restricted information.

(1) Improved Insulated Cavity Walls
(2) Competitive Low Cost School Design
(3) Improved Clay Masonry Partitions
(4) Tests on Mortars for Different Type Walls
(5) New Multistory Design in 6" brick (3 buildings in Switzerland)
(6) New Sound Absorption Tile
(7) Stain Resistant Mortars
(8) Masonry Cleaning Techniques
(9) Thermal Tests of Competitive Walls
(10) SCR Brick
(11) SCR Masonry Process
(12) Brick Packaging Methods
(13) Efflorescence Studies
(14) Vanodium Scum Studies
(15) Block Coring Studies
(16) Lightweight aggregate
(17) Prefabrication of Clay Product Panels
(18) Safety Core for Hurricane & Bomb Resistance
(19) Light Weight Clay Products
(20) Improved Facing Tile Shapes
(21) Durability and Strength Studies on Terra Cotta

A view of the SCPRF Research Center, Geneva, Ill.

the burned clay itself. Whole elements will be plant assembled, out of the weather, under ideal production conditions. Reinforcing and proper design will give us true "STRUCTURAL CERAMICS", ... shear walls, plate girders, floor panels, roof sections, built-in sound absorption and thermal insulation.

Lightweight units will weigh 25-50% of current weights. Strengths and durabilities will be more than adequate. But for many products they won't be molded, pressed or extruded as today. They'll be formed directly from hot aggregate that will fuse itself together into the size and shape desired. From this process will come the lightest, strongest building material known to date. Prestressed as floors and roofs it will span greater distances with greater loads . . . . and both surfaces can be finished for the job at hand.

But, back to our present plants! Did the first down-draft kilns work? "Stick with the scoves, boys" said the experts. How long did the first reel cutters run? "$300,000 for a tunnel kiln!" "Throw out my periodics?" The pioneers in even our industry had plenty of problems with new ideas. "A single layer tunnel kiln just can't work." But if the ultimate plan, our Industry needs a single layer kiln, it can and *will* be made to work.

If we *did* have a single layer kiln, automatic hacking and setting become relatively easy, temperature variations become minor problems, and every unit goes through the same thermal treatment. And all of this is further refined if the material processing required for lightweight aggregate is used ahead of the forming equipment. With deliberately uniform or non-uniform colors coming from the kiln, automatic photocells will do the only sorting or blending necessary. And the product will move on to automatic packaging equipment that protects the product, and speeds its use at the job.

Is all this but a dream? *Part* of it is nearly here now. Part is just around the corner and a great deal more only a little further up the road of progress. Nearly all of this picture probably could be accomplished in the next 10 years.

Would that then be all? Never, because as the road forward twists and turns, as our Industry works toward each objective, new peaks come into view . . . . each to be climbed when today's hurdles are cleared. And so, the road of progress can keep leading us on to newer, wider, always greater frontiers for structural clay products. We have good raw materials, we are gathering our knowledge, we are learning how to put it to work . . . . *together we can make our dreams come true.*

Progress thru Unity

Bob Taylor rightfully named this talk "Future Horizons or New Frontiers for Brick & Tile". It points out the role research can play in business and the Structural Clay Products Industry.

Research is extremely important to the success in the 60's. What appears nebulous to us today will be a reality tomorrow. From research to production takes a long time. At General Electric for instance, it has normally taken eight to 15 years to establish an idea into a product item. Only recently there was an exception, a transparent Al_2O_3 spanned the gap in 3 years.

By proper support of, and cooperation with SCPRF, the products of its laboratory can be products of manufacture in a briefer time than the usual eight to 15 years.

This is one activity—cooperative activity—that needs the full faith and patience of an industry—it will pay off.

Advertising Spreads the Word

For Clay Products

Exterior Color That Cannot Fade...
CERAMIC GLAZED BRICK
FACING TILE INSTITUTE
BELDEN BRICK
The Standard of Comparison
EIGHT MODERN FACTORIES LOCATED IN OHIO... THE HEART OF THE NATION'S FINEST SHALES AND CLAYS.
THE BELDEN BRICK COMPANY
For the Brick of Architectural Excellence
DARLINGTON
Royal FACE BRICK
Creative Walls by STARK
STARK CERAMICS, INC.
Versatile Ceramic Veneer provides color for Cornell campus
ACCENTUATE THE HORIZONTAL... with Stratotex
THE ALLIANCE CLAY PRODUCT CO. Alliance, Ohio
ISENHOUR quality BRICK
OVER 300 TYPES and COLORS
ISENHOUR
$4.60 per sq. ft.
OR
$18.29 per sq. ft.
what is the true cost of a modern exterior building wall?
Structural Clay Products Institute
USE NATION FACING BRICK
ALWAYS LOOK TO NATCO
natco

Advertising in Building Construction Illustrated and other architect-contractor magazines carries the message for clay products to designers and builders who rely on clay products.

Progress in the 60's . . .

Strong Right Arm of Marketing . . . Promotion, Advertising Wins Customers

The structural clay products industry has always believed in promoting and advertising its products. The degree with which this was carried out varied. In certain periods the enthusiasm and expenditures for promotion and advertising were high. In other periods the expenditures were low. However, on the whole, it might be said that in spite of the enthusiasm with which clay products have and are promoted and advertised, the industry lags behind other industries and especially competing industries.

There are however some very notable exceptions to this general observation. If we look back through the architectural and building magazines over the years, we will find consistent advertisers such as Hanley Brick Co.; Natco Corp.; Darlington Brick Co.; and more recently such newcomers as the Stark Brick Co.; Arketex Corp.; Isenhour Brick & Tile; General Shale Brick Co. As far as organization promotion is concerned, we see the ads of the Facing Tile Institute; the Terra Cotta Institute; Structural Clay Products Institute, etc. On the local level organized industry advertising is significant. For example Region 4 conducts a program through Ohio, Region 6 in Iowa, and we have seen some splendid work from Region 3 in the past.

Advertising by degrees

In order to understand the objectives of advertising and promotion, the industry must look at the job that advertising and promotion does for it and why promotion must carry on in different degrees. If a new product is to be launched which has never been seen by architects or contractors, then it must have back of it a campaign which might take up to 8 of 10% of the revenue from the product. The sale must be anticipated in advance so that sufficient funds would be available to carry on an introductory campaign.

Most products are fairly well-known but promotion and advertising is carried on for expanding its use. This campaign must be hard-hitting and generally justifies a 5% expenditure by most industries. Finally, many products are well established but need a holding campaign to constantly remind customers and prospects that the product is available and this holding campaign should approximate 3%. The main point, to remember, however, is that promotion and advertising should never stop because if you want to be in business you have to promote and advertise.

Getting back to the history of advertising in the clay products industry, we can refer back to the 20's, when the face brick industry collected 50c per thousand on their product which was expended entirely for advertising and at that time face brick sold for $18 to $20 a thousand. If we were to match that on a proportionate basis, we would be accumulating funds at the rate of $1 per thousand today because brick sells for about $40 per thousand. This would certainly build up a strong fund for battling, through promotion and advertising.

Glass Industry Example

What do others do? We need only to point to the glass industry which manufactures containers. This group spends a million and a half dollars on advertising and promotion. Their association operates on a half a million dollar budget. They expand a half of 1 percent on research (only a portion of them belong to the research program). The industry as a whole does approximately 600,000,000 dollars worth of business. Roughly a total of 3¼ million dollars is spent for advertising, promotion, industry operations and research. Our industry which does approximately $300,000,000 worth of business, on the basis of the glass industry expenditures, should be operating on a budget of roughly a million and half dollars for advertising, promotion, research and association operations.

A start has been made. The Structural Clay Products Institute and the Structural Clay Products Research Foundation are sound organizations on which this industry can grow into a giant in all respects. The need as we pointed out many times is greater participation of more members in more of the industry's activities. This participation needs to be on a national scale; it needs to be on a regional scale and, certainly, we advocate that the individual manufacturer have budgets of his own as well.

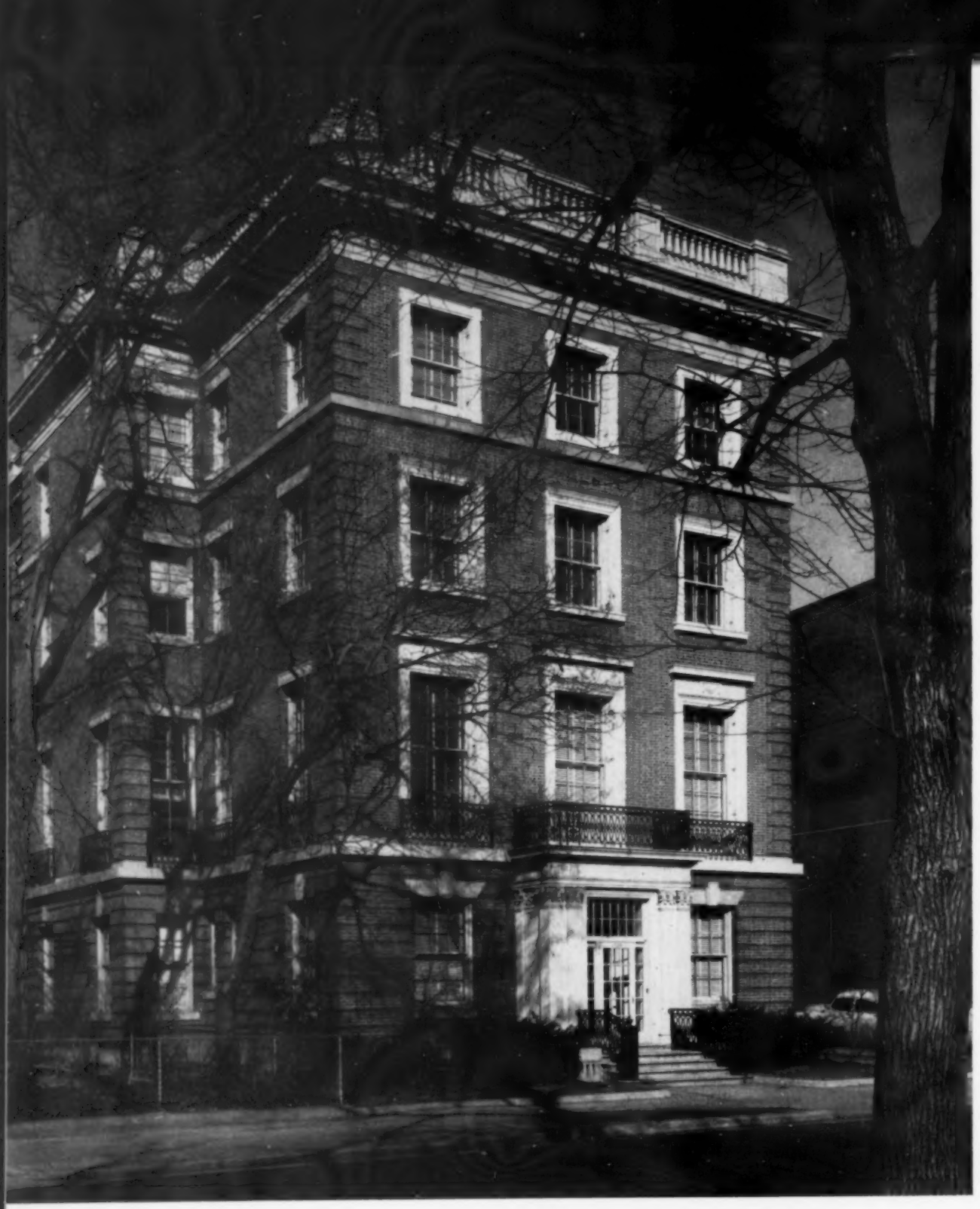
It all adds up to one word which is Unity. Through unity we will progress in the 60's.

60's Progress thru Unity

Funds for promotion and advertising can be created in three ways.

1) Improve the product so it can command a greater price.
2) Lower operating cost through mechanization which will lower costs.
3) Reduce losses by operating more efficiently; the extra brick and tile for sale is pure gravy.

Then, to suggest a bold move, funnel those extra profits into promotion and advertising on all three levels; national, regional, and local. The advertising and promotion will pay off in helping the industry attain a goal of 40-50 billion brick equivalent sales in the 60's.



The Nerve Center of the Industry
SCPI Headquarters
1520 18th St., N.W.
Washington, D. C.

Progress in the 60's . . .

One Face Towards the Market Place A Growing Industry Unites in SCPI

Not everything that happened during the depression bore the ominous overtones associated with that period.

Between the 21st and 27th of October, 1934, a convention was held in Chicago at which time a decision was made to merge the clay products industry into a single powerful organization. Thus SCPI was born.

The proposal to form the new association of the Structural Clay Industries was a direct outgrowth of the difficulties that had been experienced by the different groups then representing the various segments of the industry. Each group had gone to Washington during the preceding years and had attempted to explain their individual problems to government administrators who had become important following the inception of the "New Deal."

United Front Needed

Each of the associations had its own point of view and consequently much of the justice and force of the clay manufacturers' story was lost on the people who actually held the industry in the palm of their hands. It was felt that the clay manufacturers had not received proper recognition by the administrators of governmental emergency construction and it was noted that many of the projects then being undertaken could have been designed for the use of brick although they had not been taken. A need for a united voice was felt due to the then impending program for housing in this country.

Many felt that a new association would be able to operate with greater efficiency by reducing overlapping jobs and cutting overhead costs of the associations then operating.

There were actually four of these groups: The Common Brick Manufacturers' Assn. in Cleveland, The American Face Brick Assn., and the Structural Clay Tile Assn., both of Chicago, as well as the National Paving Brick Assn. in Washington.

Each of these groups had become vitally affected during the depression and had been forced to curtail their promotion and engineering activities to the point where little work was done in the field. The associations themselves were able to only maintain a framework of their former selves.

Trade associations for the clay manufacturing industry embraces a period of 75 years and offers some extremely interesting facts concerning the brick business. In large part the fact that the associations formed, supported and forgotten have been a reflection of the problems of the industry since the early developments of machine and power began to change the industry from the ways of the middle ages to a progressive, efficient industry.

First Ass'n. Formed

The first national trade association for brickmakers in America was formed in 1886 when some 60 brickmakers met in Cincinnati at the insistance of T. A. Randall, then editor of *The Clayworker*, to form the National Brick Manufacturers Assn.

Randall was elected secretary of that group and served in that capacity until his death in 1928. This group was more a fraternity for brickmakers than a true trade association. Operating on a small budget, the organization provided the machinery through which the new techniques in the development process could be compared and ideas exchanged among men who were pioneering a new way even though they lacked information.

The National Brick Manufacturers Assn. must be credited however with being the one organization by which all subsequent efforts must trace their origins, for as new needs for united action arose over the years the members of the parent group who felt that their needs were able to form new groups to cary out these aims of promotion, research or whatever the immediate need happened to be.

Technical Group Formed

The first of these fissions occurred in 1899 when the scientific minded members of the NBMA felt the need to form a technical group to segregate the members who were interested in this phase of the brickmaking art. This group became the American Ceramic Society and in time far outgrew the dreams of its founders.

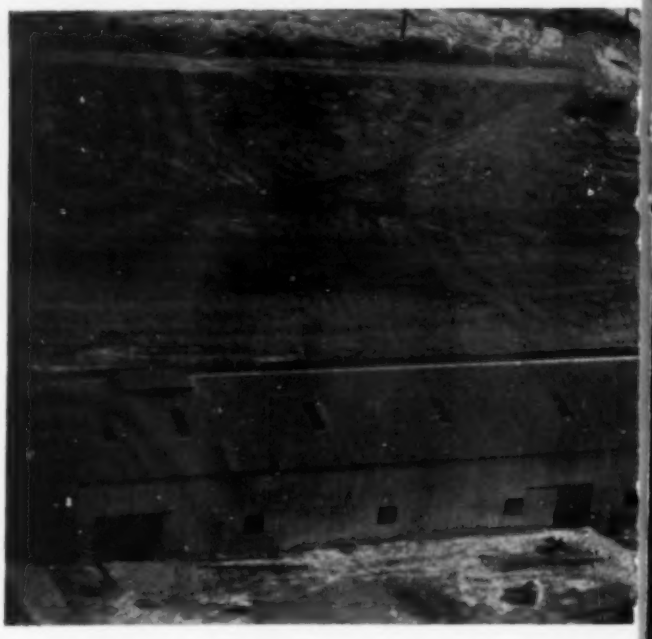
In 1905 the paving brick manufacturers formed an organization called the National Paving Brick Manufacturers Assn. This was the first of several national organizations which was formed for the promotion of the products of its members, paving brick. Its method of promotion was a combination of publicity and education to the men who specified and designed pavements. One additional aim, stated at the time of its organization, was the need for the

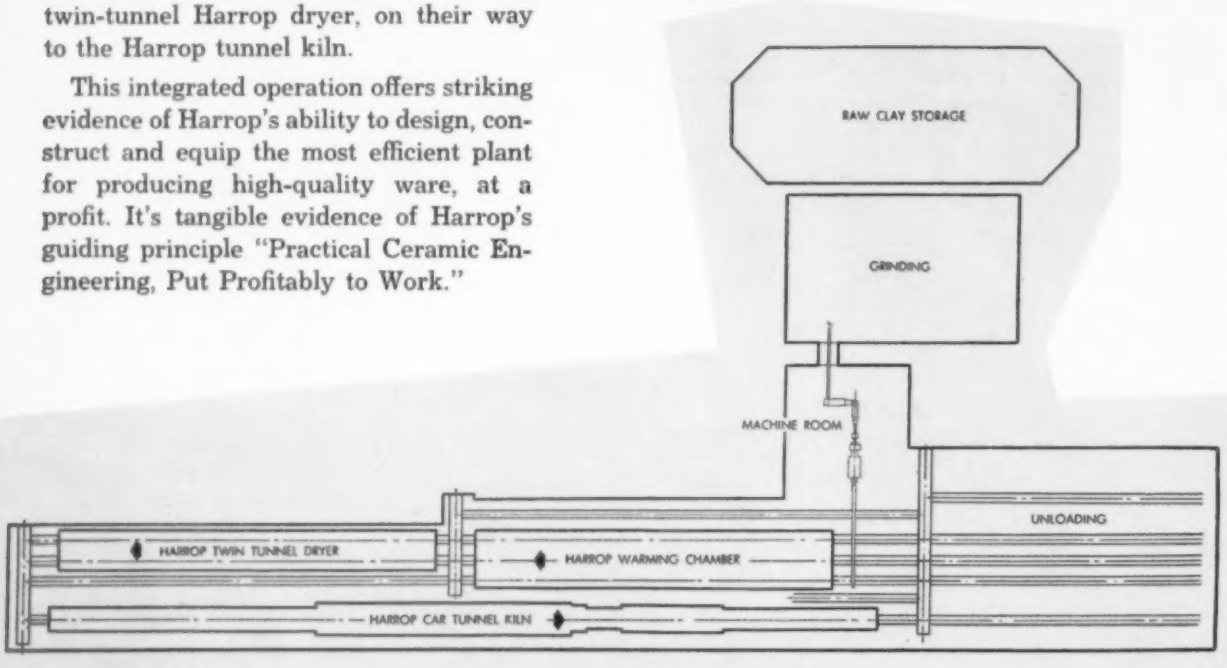
"Production Line" plant for Cloud Ceramics . .

An entire brick plant in one planned and coordinated production line . . . that's the story in a sentence of the far-sightedness and progressive management thinking of Cloud Ceramics, Concordia, Kansas, that made possible the job Harrop has recently completed for them.

The smooth-flowing production cycle moves clay from the storage shed to the grinding room, then through the factory where green brick are loaded on cars for immediate transfer to the three-track Harrop warming chamber, which has a capacity of 57 kiln cars. Movement of these cars on the setting tracks and into the warming chamber is accomplished automatically by 3 hydraulic pushers. The green brick are properly conditioned in the warming chamber before entering the twin-tunnel Harrop dryer, on their way to the Harrop tunnel kiln.

This integrated operation offers striking evidence of Harrop's ability to design, construct and equip the most efficient plant for producing high-quality ware, at a profit. It's tangible evidence of Harrop's guiding principle "Practical Ceramic Engineering, Put Profitably to Work."





Here's the new plant layout, showing the economical production flow from raw clay storage to storage of finished brick. Photograph shows the new plant in the foreground, with the old plant visible at the upper right. Specifications for the production line plant are as follows:

Main Building—*585′ long by 59′ wide*
Harrop Twin Tunnel Dryer—*each tunnel 183′ long*
Harrop Warming Chamber—*3-track, 173′ long*
Harrop Car Tunnel Kiln—*402′6″ long*
Estimated Capacity of Plant—*67,000 modular face brick per 24-hour day, or 62,000 romans, or 45,000 normans*

. . . . . designed and equipped by HARROP

POWER WINCH on the electric-powered transfer car pulls cars of dried brick from the Harrop Twin Tunnel Dryer. Clean waste heat from the cooling end of the kiln is recirculated throughout the dryer by a series of fans.

AIRLOCK at the charging end of the Harrop Car Tunnel Kiln assures constant temperature conditions as each car enters the kiln.

These key production steps in Cloud Ceramics' new plant speed production . . . raise quality . . . reduce losses

HARROP CAR TUNNEL KILN is equipped with 97 burners located in the main firing zone, preheat zone and three high-temperature recirculating zones in the charging end. This burner arrangement provides the proper atmosphere and heating control throughout the firing cycle. Fuel used is natural gas.

FIRED BRICK emerges from discharge end of Harrop open-end kiln. Facilities provide for quick or slow cooling, as required.

If you are considering the expansion of your present production facilities . . . ask Harrop for assistance now. Whether your project calls for a complete new plant, or a single dryer or kiln unit, you'll benefit by Harrop's sound, efficient planning and proven engineering ability . . . a know-how responsible for successful installations in more than 200 plants representing every type of ceramic production. Harrop invites your inquiry . . . write, wire or phone.

HARROP

Harrop Ceramic Service Co.

35 EAST GAY STREET COLUMBUS 15, OHIO

British Associate: British Ceramic Service Co., Ltd., Bricesco House, Stoke-on-Trent, England

Harrop Electric Furnace Division, 3470 E. Fifth Ave., Columbus 19, Ohio . . . Laboratory, Industrial and School Furnaces

Practical Ceramic Engineering, Put Profitably to Work

paving brick industry to be represented by a strong voice in freight rate hearings which were beginning to be an important factor in the economic well-being of that group. This group, following two examples set by the ACS, scheduled its annual meeting at the same time and place as the NBMA meeting.

In 1910 the Building Brick Assn. was formed to actively promote the use of brick for the first time, some 24 years after the NBMA had been formed. During the same year the Clay Products Assn. of America was organized to promote the sale of vitrified sewer pipe.

In 1912 the growing importance of face brick and the recognition of its special problems as a new industry resulted in the formation of the American Face Brick Assn. Almost at once it represented over half of the nation's face brick production and during its early years had promotion budgets of over a quarter of a million dollars.

In 1914 the structural tile people formed the Hollow Building Tile Manufacturers Assn. The National Building Brick Bureau formed in 1915 was an interim organization preceding the formation of the Common Manufacturers Assn. in 1918. Each of these structural clay associations, face brick, hollow tile and common brick, played a strong role in the struggle for markets then being fought by the proponents of each of the fired clay building materials.

Critical Period Reached

The NBMA had long since lost its value as a meeting place for the industry and its functions had changed to a vehicle for the handling of research funds. Internal strife had reduced its membership and in 1931 all remaining members were taken as a group into a new division of the ASC. This was the Structural Clay Products Division. The activities of the NBMA, promotion of research, were continued for a few years by a foundation formed for that purpose.

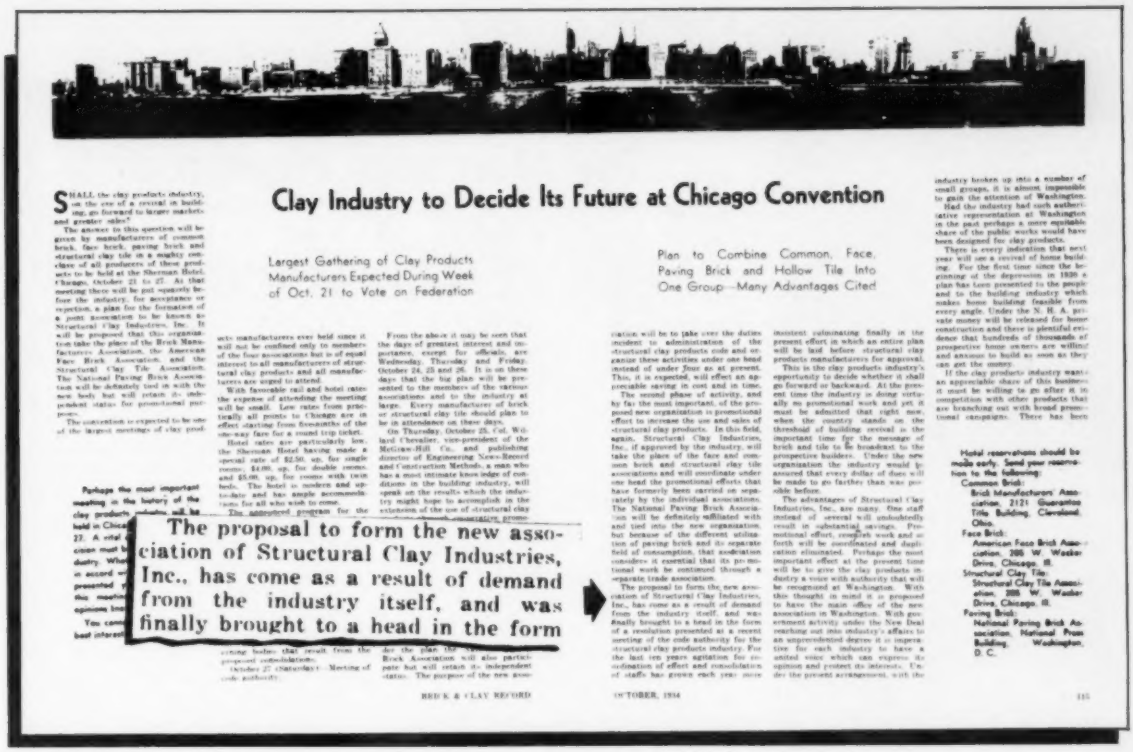
In 1931, when the depression had started to take its toll of producers and consequently association income, officials of the Face Brick group proposed that the time was ripe for a consolidation of the competing associations.

Moreover it was becoming increasingly clear that the historical concept of competition had indeed changed. No longer was intra-industry competition the major problem; rather it had now become a battle of whole industries for the same market.

Such a need for a single association had been foreseen as early as 1917, when *Brick & Clay Record* proposed a single unified voice for the clay industry on the basis that the competing groups represented a duplication of each others work and that the true competition came from outside the clay industry.

But the developments of the first quarter of a century had been too trying and the 1931 proposals were not implemented with action until 1934. It is interesting to note that when SCPI was formed in 1934 as a result of the Chicago meeting, another corporate entity, the Structural Clay Institute, Inc. was set up under the NRA. The call for the Chicago meeting didn't provide for two organizations to be formed in its preconvention publicity and the unrecorded author of this change of plans should give full credit for a situation that allowed SCPI to continue its early growth without being forced

A meeting of members of the Structural Clay Products Institute depletion committee with Board Chairman and General Counsel Douglas Whitlock to plan action on depletion matters. This project is an example of intra-industry as well as inter-industry cooperation. Sitting in on the meeting are members of the National Clay Pipe Manufacturers, Inc.



Clay Industry to Decide Its Future at Chicago Convention

Largest Gathering of Clay Products Manufacturers Expected During Week of Oct. 21 to Vote on Federation

Plan to Combine Common, Face, Paving Brick and Hollow Tile Into One Group—Many Advantages Cited

SHALL the clay products industry, on the eve of a revival in building, go forward to larger markets and greater sales?

The answer to this question will be given by manufacturers of common brick, face brick, paving brick and structural clay tile in a mighty conclave of all producers of these products to be held at the Sherman Hotel, Chicago, October 21 to 27. At that meeting there will be put squarely before the industry, for acceptance or rejection, a plan for the formation of a joint association to be known as Structural Clay Industries, Inc. It will be proposed that this organization take the place of the Brick Manufacturers Association, the American Face Brick Association, and the Structural Clay Tile Association. The National Paving Brick Association will be definitely tied in with the new body but will retain its independent status for promotional purposes.

The convention is expected to be one of the largest meetings of clay products manufacturers ever held since it will not be confined only to members of the four associations but is of equal interest to all manufacturers of structural clay products and all manufacturers are urged to attend.

With favorable rail and hotel rates the expense of attending the meeting will be small. Low rates from practically all points to Chicago are in effect starting from fewmonths of the one-way fare for a round trip ticket.

Hotel rates are particularly low, the Sherman Hotel having made a special rate of $2.50, up, for single rooms, $4.00, up, for double rooms, and $5.00, up, for rooms with twin beds. The hotel is modern and up-to-date and has ample accommodations for all who wish to come.

The announced program for the

From the above it may be seen that the days of greatest interest and importance, except for officials, are Wednesday, Thursday and Friday, October 24, 25 and 26. It is on these days that the big plan will be presented to the members of the various associations and to the industry at large. Every manufacturer of brick or structural clay tile should plan to be in attendance on these days.

On Thursday, October 25, Col. Willard Chevalier, vice-president of the McGraw-Hill Co., and publishing director of Engineering News-Record and Construction Methods, a man who has a most intimate knowledge of conditions in the building industry, will speak on the results which the industry might hope to accomplish in the extension of the use of structural clay

The proposal to form the new association of Structural Clay Industries, Inc., has come as a result of demand from the industry itself, and was finally brought to a head in the form

industry broken up into a number of small groups, it is almost impossible to gain the attention of Washington. Had the industry had such authoritative representation at Washington in the past perhaps a more equitable share of the public works would have been designed for clay products.

There is every indication that next year will see a revival of home building. For the first time since the beginning of the depression in 1930 a plan has been presented to the people and to the building industry which makes home building feasible from every angle. Under the N. H. A. private money will be released for home construction and there is plentiful evidence that hundreds of thousands of prospective home owners are willing and anxious to build as soon as they can get the money.

If the clay products industry wants an appreciable share of this business it must be willing to go after it in competition with other products that are branching out with broad promotional campaigns. There has been

Hotel reservations should be made early. Send your reservation to the following:

Common Brick:
Brick Manufacturers Association, 2121 Guarantee Title Building, Cleveland, Ohio.

Face Brick:
American Face Brick Association, 205 W. Wacker Drive, Chicago, Ill.

Structural Clay Tile:
Structural Clay Tile Association, 205 W. Wacker Drive, Chicago, Ill.

Paving Brick:
National Paving Brick Association, National Press Building, Washington, D. C.

BRICK & CLAY RECORD

OCTOBER, 1934

In October, 1934, *Brick & Clay Record backed plan editorially to unify industry.*

to stand the shock of the overturn of the NRA in 1935.

Only the face brick, paving brick and hollow tile associations joined forces in 1934. In the convention with the BMA considering the question, a tie vote kept the group out of SCPI. However by 1938 a majority of this group too saw the need for a single organization dedicated to promoting all clay products. Thus they merged with SCPI. For the first time a single organization was representing an industry, which though sorely beset by the great depression, nevertheless was willing to do battle in the market place for its share of what little business there was.

From the first the new association was oriented toward the big market place. Though weak at the beginning in finances, and understaffed, SCPI moved vigorously into sales promotion and consumer education. In 1936 the first convention was held in French Lick, Ind., with a positive program being presented to the 250 manufacturers and dealers. Dues were raised to ½ of 1% and a budget of $62,000 was presented to cover the promotional, educational and industry service work.

By 1938, the programs which are still continued, were put into force. Apprenticeship training, technical and popular publications were introduced to further the uses of the industries' products. War-time construction of the following years at first lifted the industry from the doldrums, and then as the economic controls applied from Washington began to take effect, SCPI undertook a new function, that of cordination of industry needs and capabilities to the government's over-all war-time requirements.

The resulting increase in work caused SCPI to move to new offices in 1941. SCPI was able to take a bigger load with an improvement in the production picture. With a multitude of governmental codes controlling manpower, replacement equipment, sales and selling prices, close governmental liason was required to protect the interest of this resurgent industry.

It is interesting to note the stages which were followed in unifying this little giant of an industry while being strengthened at each step.

1) Industry united for exchange of ideas. 2) Branches of the industry united for promotion, advertising and engineering. 3) All branches of industry combine efforts to form SCPI.

The next step, of course, is to double the efforts of SCPI by greater membership. This is the goal of the 60's and the goal which will go a long way in making the 60's belong to clay products.

Director Joe Stryker

Wm. F. Roark

Leonard Kirsten

Progress in the 60's . . .

The Machinery of a United Industry . . . The Men and Women of SCPI

In the Washington, D. C. headquarters of the Structural Clay Products Institute is a dedicated team of 34 men and women who keep the machinery of the national association running at top efficiency.

Chairman of the Board and General Counsel Douglas Whitlock meets regularly with the full staff and individual department heads in the day-to-day operation of the Institute. Executive Director J. W. Stryker and Secretary J. J. Cermak man the Administration Department which insures that the policies and budgets approved by the Board of Directors are carried out. Such activities as the annual convention, the spring executive committee meetings and other special meetings are directed from this office.

The Acounting Department, headed by Mrs. Magdalen H. Gilbert, Comptroller, "keeps the books" for SCPI, SCPRF and certain field activities.

With promotional activities such a vital part of the clay products industry's efforts, it is not surprising that the largest budget is devoted to the Promotion Department. Director John E. Clark and the staff carry out a program designed to do one thing: increase the use and sales of structural clay products. This program is a three-fold one:

1) *Pre-selling.* This important activity *pre-sells* the architect, the engineer, the builder, the mason contractor and the consumer on the advantages of brick and structural tile. This is done via national advertising, closed circuit television, merchandising—in fact, through every modern sales communication technique.

2) *Promotional Material.* A wide variety of promotional material is developed for the industry by the Promotion Department. This includes everything from small envelope stuffer pamphlets, through the full-color Brick & Tile brochure, to packaged sales promotion meetings.

3) *Industry Contact.* The Promotion Department works with regional offices and individual manufacturers to help them relate the national promotional activities of SCPI to their local market efforts to gain maximum sales impact. A look at the SCPI catalog reveals the great variety of promotional tools produced and put into circulation by the Promotion Department for the industry.

The Engineering and Technology Department carries on a year-round program of investigating, documenting and teaching the technology of clay products. Under Harry C. Plummer, the E&T Department directs an "investigation" program which is a fact-finding operation involving consultation in all phases of the building industry. This includes engineering, aesthetics and economics.

The E&T "documentation" follows the investigation work. The staff work covers specification recommendations, local and national building codes, structural design, construction methods and cost analysis. The highly regarded monthly series "Technical Notes on Brick & Tile Construction" and the recent "Ultimate Cost of Building Walls" survey are two examples.

Education Vital

"Education" to the Engineering and Technology Department means reaching architects, engineers, builders, contractors and the industry sales force with this carefully developed documentation.

A notable phase of this program is the continuing close contact with federal government architects and engineers all year long. SCPI's Sales Engineer Training Classes are also part of the program.

Keeping the construction industry provided with an effective bricklayer force in balance with the volume of clay products produced is the major work of the Mason Relations Department. Director William F. Roark maintains a close liaison with government, labor and mason contractors

in the training of skilled bricklayers through apprenticeship.

The Mason Relations Department's close working relations with the Bricklayers, Masons & Plasterers International Union is a model for the entire construction industry. SCPI's participation in the Allied Masonry Council is also spearheaded by this department. Another newer activity of the Mason Relations Department is a market conversion program, an investigation and study of local residential markets. Market analysis is followed by a detailed blueprint of action to capture more of the housing market in the area.

The Public Relations Department, headed by Leonard Kirsten, conducts a public relations program for the industry which is designed to create a positive image of the brick and tile industry before the American public. This is done through a variety of modern communication techniques including the distribution of news releases and photographs to some 1,000 daily and weekly newspapers, trade publications and consumer magazines. The Public Relations Department maintains close contact with editors and reporters around the country, developing the concept that SCPI is the central editorial source of information about the clay products industry. Kirsten also edits the monthly *SCPI Newsletter*, a report to the industry from SCPI.

With communications so vital in the running of an organization, *every* department maintains a close liaison with the regional offices and individual manufacturers.

It is these activities and more that will enable the industry to meet its future needs if it is to grow with its opportunities. No one company can hope to do these things. Progress can only be made by every single structural clay product manufacterer contributing to these efforts. The 60's will belong to clay products only by unified action.

**Brick and Clay Record Editors are indebted to Leonard Kirsten, SCPI public relations director, for this material.*

J. J. Cermak

John E. Clark

Harry C. Plummer

60's Progress thru Unity

No matter what your problem happens to be, there is a department set up to cope with the problem and a qualified expert to head up the department. As the problems of the 60's develop, these departments will no doubt be strengthened to meet the problems. They particularly need the cooperation of the entire industry for their support. With adequate financing the abilities and specialties of these men can best be utilized.

Magdalen H. Gilbert

The foresightedness of Doug Whitlock has been a great factor in the successes of SCPI. He has moved the organization in logical steps to its present position. Not only has he brought SCPI to a sound condition but has organized and brought into cooperation many outside factors so that the entire industry can work together. Bricklayers, mason contractors, dealers and even other masonry product manufacturers were banded together to promote and widely tell the story of masonry. It is a continuing of such action and thought that will make the 60's belong to clay products.

Vital Force for Unity....

SCPI's Douglas Whitlock

Since his first association with the Structural Clay Products Institute in 1933, Douglas Whitlock has been a vital force in the educational, economic, promotional and research growth of the industry. One way to judge the growth of SCPI under Whitlock's leadership is to note that in 1934 the Institute started with two employees in two rented rooms in Washington, D. C. Today, SCPI is based in its own headquarters building in Washington with 34 employees. In addition, there are 29 regional offices across the United States with some 70 employees serving the industry, as well as a multi-million dollar research laboratory in Geneva, Illinois with 34 employees. But such statistics, however interesting, do not begin to tell the story.

Whitlock's substantial contribution to the advancement of the clay industry began in 1933, when as a young lawyer in the Washington firm of Sanders, Childs, Bobb & Westcott, he prepared a code for the operation

of the brick and tile industry under the National Industrial Recovery Act. This code placed the operation of five divergent associations within the industry under identical regulation and required the cooperation of formerly independent segments of the industry.

Under the code authority, manufacturers of face brick, common brick, paving brick, structural clay tile and glazed brick and tile learned the advantages of a unified organization. When the code authority was declared unconstitutional, most industry men recognized the need for a single organization to speak for the industry and to conduct a promotional and technical program to expand markets for their products. Whitlock, with a talent for uniting divergent factions into cooperative effort, was the choice to lead the newly formed Structural Clay Products Institute.

From 1934 through 1940, Whitlock directed his efforts towards the consolidation of five clay manufacturers groups into an effective association. The result was not only one organization, but equally important, a new unity which enabled the Institue to document the technology of the industry, now one of its strongest pillars. A highly regarded engineer, Harry C. Plummer, was added to the staff by Whitlock to begin this definition and specification of the industry's products. At the same time, Joseph J. Cermak joined the staff and started his quarter-century of service as Secretary, a position he still holds.

Turns to Training

During this same early period, Whitlock turned to the field of apprenticeship and vocational training. In 1937, under his direction, the industry began a program of training which would insure an adequate, well-trained supply of masons for the construction industry. The manpower needs of the defense program and later, World War II, brought the program to a temporary halt.

The new SCPI organization was making an impact on the construction industry scene when war came in late 1941. Whitlock effectively converted the clay products industry to a wartime footing. In the 1942-45 period, he organized the Industry War Council, a special clay industry group set up to adjust the industry to wartime regulations. As General Counsel his services were often called into use during this time of heavy government regulation.

Recognized the need for SCPI to become a part of the whole construction industry scene, he helped revitalize The Producer's Council, an association of quality building materials producers. He served as its President from 1943 to 1945 and is currently a member of its Executive Committee and Board of Directors.

The return of peace brought the opportunity to strengthen the SCPI organization at the local level. Whitlock worked with manufacturers at the grass-roots level in establishing regional offices across the country, each manned with well-trained industry men. From one office in Iowa during the war, the SCPI regional offices have grown to 29 at present.

Realizing that the industry needed the strong cooperation of the Bricklayers, Masons & Plasters International if it was to advance in the construction industry, Whitlock and BM&PIU President Harry C. Bates established a close, thoroughly frank, working relationship which has been the basis of long-term mutually beneficial programs in apprenticeship and other fields.

Need For Research

The Structural Clay Products Industry conducted limited research and testing programs from 1933 to 1948. When a survey of the industry made by Arthur D. Little, Inc. indicated a need for research, Whitlock spearheaded a national campaign to establish a research organization. In 1950, the Structural Clay Products Research Foundation was born and thus began a decade of cooperative research which has already resulted in a number of products and processes that assure the industry's place in the construction world of today and tomorrow.

With research firmly established and the technology of the industry completely documented, Whitlock urged SCPI to renew and intensify its promotional programs in the face of postwar competition. The industry then went all-out on a program which was to embrace full-color national advertising, films, sales conventions, closed circuit television, and merchandising.

The industry's fight for its fair share of depletion allowance actually began in 1951 when Whitlock assisted in securing passage of the Revenue Act of 1951 which included clay in its coverage of depletion. Since that time, acting as General Counsel, Whitlock has piloted the long and difficult legal struggle which has already seen 75 court cases.

A firm advocate of teamwork in the construction industry, Whitlock gave strong encouragement to the postwar establishment of the Mason Contractors Association of America. He steered the 1955 campaign to organize the Allied Masonry Council, a unique association of materials producers, contractors and union labor. He is Chairman of AMC which has already struck many effective blows in behalf of the masonry industry.

While much of the SCPI activity of the past 25 years bears the unmistakable mark of Whitlock's leadership, he is quick to insist that the good things accomplished by the industry have been the result of many men of strength, vision and good will working together.

In commenting on SCPI's 25th anniversary recently, Whitlock said, "While we are proud of SCPI's past history, patting ourselves on the back or sitting by the fire reliving old memories is not in keeping with the spirit of SCPI. What we are interested in is the *next* 25 years. A look ahead at the next quarter century is a breath-taking one. We are the manufacturers of products that are here to stay. Through our research efforts, new products and processes will take their place beside the current ones to serve the wide needs of the architect, engineer, and builder.

"SCPI's dynamic promotional and public relations efforts, its authoritative technology, its strong mason relations—all of these things are sources of strength for the future.

"Our close working partners in the masonry industry—the bricklayer and the mason contractor—will also add to our vigor as we face the challenge of the next 25 years," he predicted.

**Brick and Clay Record Editors are indebted to Leonard Kirsten, SCPI public relations director, for this material.*

Progress in the 60's . . .

Bones and Sinews of a United

SCPI COMPANY MEMBERS

ACME BRICK CO.
Fort Worth, Texas

ADEL CLAY PRODUCTS CO.
West Des Moines, Iowa

ALAMO CLAY PRODUCTS CO.
Elmendorf, Texas

ALLIANCE CLAY PRODUCT CO.
Alliance, Ohio

ALWINE BRICK CO.
New Oxford, Pa.

AMERICAN TERRA COTTA CORP.
Chicago, Ill.

APPALACHIAN SHALE PROD. CO.
Marion, Va.

AVA BRICK CO.
Ava, Ohio

BALTIMORE BRICK CO.
Baltimore, Md.

BARBOURSVILLE CLAY MFG. CO.
Charleston, W. Va.

BEATRICE BRICK & TILE CO.
Beatrice, Nebr.

BELDEN BRICK CO.
Canton, Ohio

BICKERSTAFF CLAY PROD. CO.
Columbus, Ga.

BOREN CLAY PROD. CO.
Pleasant Garden, N. C.

BRICK & TILE CORP.
Lawrenceville, Va.

BRIDGEWATER BRICK CO.
Bridgewater, Mass.

BRIGHAM BRICK CORP.
Hoboken, N. J.

BRISCH BRICK CO.
Chicago, Ill.

BROOKLYN BRICK CO.
Brooklyn, Ind.

BUFFALO BRICK CORP.
Buffalo, N. Y.

BUSH & CO., W. G.
Nashville, Tenn.

CALIFORNIA CLAY PRODUCTS
Stockton, Calif.

CANNON & CO.
Sacramento, Calif.

CARLISLE BRICK & TILE CO.
Carlisle, Iowa

CHAMPLAIN BRICK CO.
Mechanicville, N. Y.

CHEROKEE BRICK & TILE CO.
Macon, Ga.

CLAYCRAFT CO.
Columbus, Ohio

CLEVELAND BUILDERS SUPPLY CO.
Cleveland, Ohio

COMFORT BRICK & TILE CO.
Tecumseh, Mich.

CONTINENTAL CLAY PROD. CO.
Kittanning, Pa.

CORAL RIDGE BRICK & TILE CORP.
Coral Ridge, Ky.

CRUMPLER BRICK & TILE CO., INC.
Roseboro, N. C.

CUSHWA & SONS, VICTOR
Williamsport, Md.

DELTA BRICK & TILE CO.
Indianola, Miss.

DENVER BRICK & PIPE CO.
Denver, Colo.

DENVER TERRA COTTA CO.
Denver, Colo.

DES MOINES CLAY CO.
Des Moines, Iowa

D'HANIS BRICK & TILE CO.
D'Hanis, Texas

DONLEY BRICK CO.
Washington, Pa.

DONNELLY BRICK CO.
New Britain, Conn.

EAST KINGSTON BRICK CO.
Hoboken, N. J.

ELGIN-BUTLER BRICK CO.
Austin, Texas

ELGIN-STANDARD BRICK MFG. CO.
Elgin, Texas

EL PASO BRICK CO.
El Paso, Texas

ENDICOTT BRICK & TILE CO.
Fairbury, Nebr.

EUREKA BRICK & TILE CO.
Clarksville, Ark.

EVANS BRICK CO.
Uhrichsville, Ohio

EXCELSIOR BRICK CO.
Fredonia, Kas.

FAIRFIELD BRICK CO.
Zoarville, Ohio

FEDERAL SEABOARD TERRA COTTA CORP.
New York, N. Y.

FLAT ROCK CLAY PRODUCTS CO.
Flat Rock, Mich.

FRASER BRICK & TILE CO.
San Antonio, Tex.

GASPRO, LTD.
Honolulu, Hawaii

GENERAL SHALE PRODUCTS CORP.
Johnson City, Tenn.

GLADDING, McBEAN & CO.
San Francisco, Calif.

GLANDORF TILE CO.
Glandorf, Ohio

GLEN-GERY SHALE BRICK CORP.
Shillington, Pa.

GOODWIN TILE & BRICK CO.
Des Moines, Iowa

GRABE BRICK CO.
Tucson, Ariz.

HAMMOND-BATON ROUGE BRICK CO.
Hammond, La.

HANCOCK BRICK & TILE CO.
Findlay, Ohio

HAVILAND CLAY WORKS CO.
Haviland, Ohio

HAZELTON BRICK CO.
Hazelton, Pa.

HENDERSON CLAY PRODUCTS CO.
Henderson, Tex.

HILL BRICK CO.
East St. Louis, Ill.

HOPE BRICK WORKS
Hope, Ark.

HUMBOLDT BRICK & TILE CO.
Humboldt, Kansas

HUTTON CO.
Kingston, N. Y.

HYDRAULIC-PRESS BRICK CO.
St. Louis, Mo.

ILLINOIS BRICK CO.
Chicago, Ill.

INDIANA DRAIN TILE CO., INC.
Brooklyn, Ind.

INTERSTATE BRICK CO.
Salt Lake City, Utah

ISENHOUR BRICK & TILE CO.
Salisbury, N. C.

JENKINS BRICK CO.
Montgomery, Ala.

JOHNSTON CLAY WORKS, INC.
Fort Dodge, Iowa

JOVA BRICK WORKS
Roseton, N. Y.

KANE BRICK CO., MICHAEL
Middletown, Conn.

KASTEN BROTHERS BRICK CO.
Jackson, Mo.

KENDRICK BRICK & TILE CO.
Mt. Holly, N. C.

KETCHAM, O. W.
Philadelphia, Pa.

KEY-JAMES BRICK CO.
Chattanooga, Tenn.

KINNEY BRICK CO.
Albuquerque, N. Mex.

KRAFTILE CO.
Niles, Calif.

LAKEWOOD BRICK & TILE CO.
Denver, Colo.

LOCHER BRICK CO., INC.
Glasgow, Va.

LOGAN CLAY PRODUCTS CO.
Worthington, Pa.

LOS ANGELES BRICK & CLAY PRODUCTS CO.
Los Angeles, Calif.

LOVELL CLAY PRODUCTS CO.
Lovell, Wyo.

MALVERN BRICK & TILE CO.
Malvern, Ark.

MALVERN FLUE LINING, INC.
Malvern, Ohio

MARTIN BRICK CO.
Coleman, Tex.

MASON CITY BRICK & TILE CO.
Mason City, Iowa

McARTHUR BRICK CO.
McArthur, Ohio

McNEAR BRICK CO., L.P.
San Rafael, Calif.

MERRY BROTHERS BRICK & TILE CO.
Augusta, Ga.

METROPOLITAN BRICK, INC.
Canton, Ohio

MILLIKEN BRICK CO.
Pittsburgh, Pa.

MOLAND-DRYSDALE CORP.
Hendersonville, N. C.

MONROE CLAY PRODUCTS CO.
Monroe, Ore.

MOORHEAD BRICK & TILE CO.
St. Joseph, Mo.

MOWRYSTOWN BRICK & TILE CO.
Mowrystown, Ohio

Industry—Members of SCPI

NASSAU BRICK CO.
Farmingdale, L. I., N. Y.
NATCO CORP.
Pittsburgh, Pa.
NEVADA BRICK & TILE CO.
Nevada, Iowa
NEW BETHLEHEM TILE CO.
New Bethlehem, Pa.
NORTHWESTERN TERRA COTTA CORP.
Chicago, Ill.
OCHS BRICK & TILE CO.
Springfield, Minn.
OHIO CLAY CO.
Cleveland, Ohio
OLD VIRGINIA BRICK CO., INC.
Salem, Va.
OSKALOOSA CLAY PRODUCTS CO.
Oskaloosa, Iowa
OTTUMWA BRICK & TILE CO.
Ottumwa, Iowa
PEORIA BRICK & TILE CO.
Peoria, Ill.
PINE HALL BRICK & PIPE CO.
Winston-Salem, N. C.
PORT COSTS BRICK WORKS
San Francisco, Calif.
POWELL & MINNOCK BRICK WORKS
Coeymans, N. Y.
PRESTON CLAY PRODUCTS CO.
Seville, Ohio
REDFIELD BRICK & TILE CO.
Redfield, Iowa
REDFORD BRICK CO.
Richmond, Va.
RELIANCE CLAY PRODUCTS CO.
Dallas, Tex.
REMILLARD BRICK CO., INC.
San Mateo, Calif.
REMILLARD-DANONI CO.
Oakland, Calif.
RICHARDS BRICK CO.
Edwardsville, Ill.
RICHLAND SHALE BRICK CO.
Mansfield, Ohio
ROAH HOOK BRICK CO.
Coeymans, N. Y.
ROBINSON BRICK & TILE CO.
Denver, Colo.
ROCKFORD BRICK & TILE CO.
Rockford, Iowa
ST. JOE BRICK WORKS
New Orleans, La.
SALISBURY BRICK CO., INC.
Salisbury, Md.
SAN JOSE BRICK & TILE LTD.
Oakland, Calif.
SHEFFIELD BRICK & TILE CO.
Sheffield, Iowa
SHEFFIELD SHALE PRODUCTS CO.
Sheffield, Ill.
SOUTHSIDE BRICK WORKS, INC.
Richmond, Va.
STANDARD BRICK & TILE CORP.
Evansville, Ind.
STAPLES, ALVA S.
Kingston, N. Y.
STARK CERAMICS, INC.
Canton, Ohio
STILES CORP.
North Haven, Conn.
STILES & HART BRICK CO.
Taunton, Mass.
STONE CREEK BRICK CO.
Stone Creek, Ohio
SUMMIT PRESSED BRICK & TILE CO.
Pueblo, Colo.
SUTTON & SUDERLEY BRICK CO.
Coeymans, N. Y.
TEAGUE BRICK & TILE CO.
Teague, Tex.
TEXAS CLAY PRODUCTS
Malakoff, Tex.
TRI-STATE CO.
Jackson, Miss.
TWIN CITY BRICK CO.
St. Paul, Minn.
UNION BRICK CO.
San Diego, Calif.
UNITED CLAY PRODUCTS CO.
Washington, D. C.
UNITED MATERIALS & RICHMOND BRICK CO., LTD.
Point Richmond, Calif.
U.S. BRICK CO.
Tell City, Ind.
VINCENT CLAY PRODUCTS CO.
Ft. Dodge, Iowa
WASHINGTON BRICK CO.
Washington, D. C.
WEBSTER BRICK CO.
Roanoke, Va.
WESTERN BRICK CO. DIV., ILLINOIS BRICK CO.
Danville, Ill.
WEST VIRGINIA BRICK CO.
Charleston, W. Va.
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Milford, Del.
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GLADDING, McBEAN & CO.
San Francisco, Calif.

60's Progress thru Unity

The membership of SCPI includes all classes of members; those who have been in for a very long time, those who are medium in membership life, and the many new members. All are important to the success of the 60's through unity. Associate and contributing members are lending a hand in all of the activities of SCPI.

Complete list as of press time.

Progress in the 60's . . .

Clay Products Hall of Fame . . .

Kenneth W. Dunwody
(1957—)

John Stewart
(1955-57)

Russell Eshenhour
(1953-55)

L. D. Meyer
(1952-53)

Forrest Tefft
(1950-52)

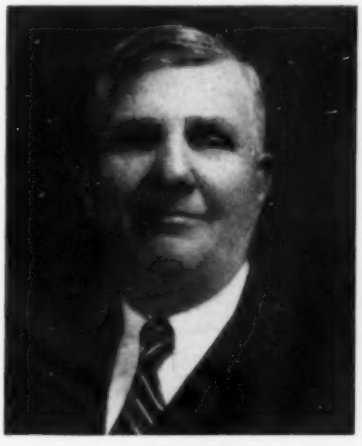
A Quarter Century of Leadership

William J. Goodwin, Jr.
(1948-50)

Roy Shipley
(1946-48)

Ernest Fender
(1942-46)

Greer McIlvane
(1941-42)



Eben Rogers
(1937-41)

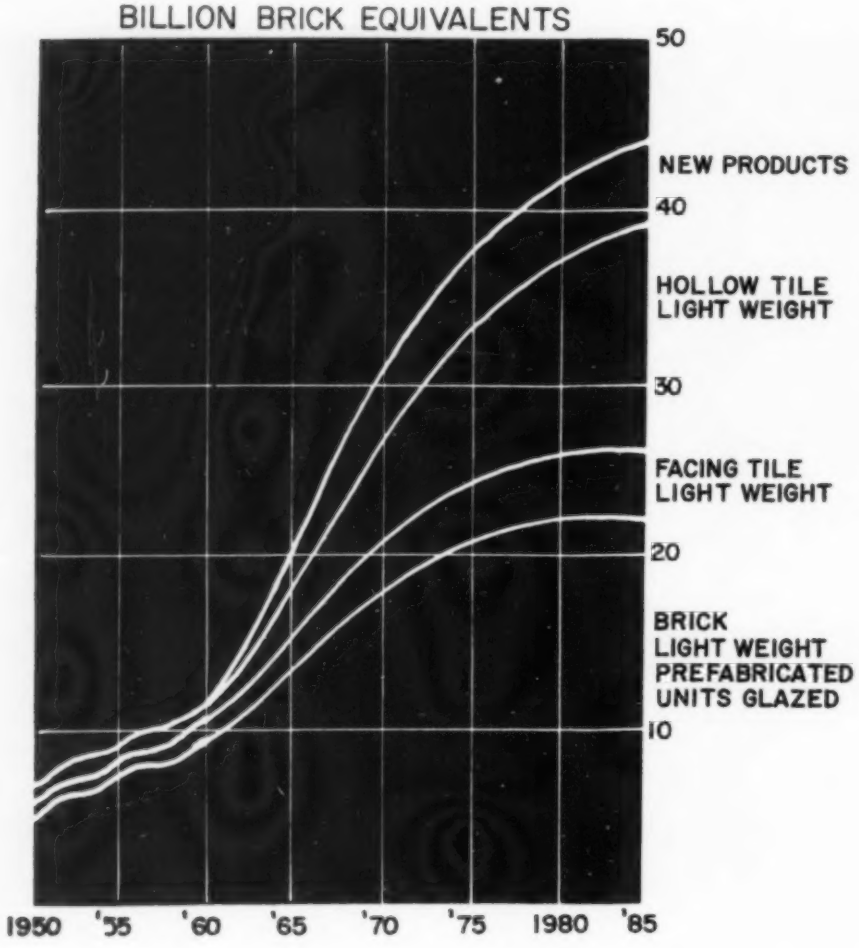
O. W. Renkert
(1934-37)

As SCPI moves along in the 60's, this berth of president can be bestowed upon selected men of the industry in accordance with the needs of the industry. If organization needs a boost, an organization minded man should be president. If promotion needs a boost, then a promotion minded man should be elected. Whether the bolstering is in sales, promotion, advertising, engineering, research, or any other activity, the likely candidate for the job should be an expert in the present need.

60's Progress thru Unity

Progress in the 60's . . .

We Can Have This Kind of Future. It Can Be Bullish



The normal growth of the industry can be predicted by following the ever-increasing building curve. The increase in business over and above the normal growth depends on what the industry does in the fields of research, promotion, advertising, engineering, distribution and service. It is the hope of Brick & Clay Record that, by greater unity, all these functions will not only be well taken care of, but the activity increased twofold. This can mean the fulfillment of the forecast made in the chart, and that is an industry four times its present size. Brick production can go from 6 to 23 billion brick equivalents, facing tile from ½ to 3½ brick equivalents, hollow tile from 1.2 to 13 billion brick equivalents for a total of 44½ billion brick equivalents by 1985. New Products will add 5 million brick equivalents.

If We Recognize These Problems and Opportunities

1—Competition from large giants like individual steel, concrete, glass, plastic, aluminum and lumber companies can prevent the clay industry from reaching its full potential.

2—The total of all the clay plant firms have a sales volume less than many single individual competing firms.

3—The trend is to larger more efficient but fewer number of plants.

4—Directors, Partners, Managements of structural clay product firms have no alternative but to improve their plants and unite with all clay plants in general modern industry activities such as promotion.

5—Population growth, obsolescence of buildings will create a market potential in the 60's that could quadruple the sales of clay products.

6—Directors, Partners and Managers must however develop products, sales strategy and plant improvements to meet the conditions and needs of the soaring sixties.

7—Success in the 60's will not come to all plants just because the economic climate will be favorable.

8—Competitive climate will be unfavorable unless all plants contribute their share to a united industry effort.

9—SCPI is the instrument available. Use it.

10—You owe an obligation to your predecessors from whom you inherited a valuable capital investment. Are you going to turn over to your successors a better plant or bleed it for lack of adequate foresight.

60's Progress thru Unity

The achieving of the goals set down in the chart on the preceding page is beset with many problems. They are enumerable here. Above everything, conquering the problems will take unity. It will require great determination. It will mean sacrifices. But how else can real success and progress be attained? There must be great faith in the industry, in ourselves, and in SCPI to carry out the forwardness. And it can only be done by proper and full backing of the whole industry.

.....And Meet Our Challenge With This Kind of Unified Action

Progress thru Unity

After 25 years of trials and tribulations, SCPI has reached a point in its history where unity in the clay products industry is becoming a reality. SCPI represents a greater portion of production in a unified force than ever was represented by any one organization before.

With this background of the backing of the greatest percentage of the plants ever represented, and the greatest production of clay products ever represented, the basis and frame work exists today in SCPI which is well able to handle the full responsibilities of an association. The organization is, therefore, essentially complete. Its separate activities cover such industry needs as legal council, technical notes, government contracts, public relations, sales training, apprentice training, advertising, promotion and many others. SCPI's history as a leader has been fully tried and proven. It has been tried under the fires of depression, war time controls and confusion, post-war rehabilitation and the boom times of the past few years. With this experience SCPI can continue with its present support proven to the present membership.

Then what remains to be done is to expand the activities of SCPI. Instead of feasting on hamburger we should be feasting on steaks and this can very well be achieved by further contributions to SCPI by more membership in the organization. The additional contributions would be pure cream with which to make those vigorous attacks upon competition and new fields. The present building in Washington and the present staff of SCPI are the foundations upon which much more publicity promotion, engineering and other activity can be built. Additional funds to expand their activities are needed.

From the individual manufacturer's standpoint, an investment in the unity of the industry will be an investment in his future. The battle lines are drawn. Now we can start a real offensive through greater unity. The clay products manufacturer can find no better buy for his promotion, advertising, and engineering dollar. The clay products manufacturer can find no better time to make the necessary investment in his future than today. The time is now, the tool is SCPI.

With but a doubling in the membership, its value to the membership and the industry would be more than quadrupled. The entirely increased income could go into productive efforts which would be a powerful force in the advancement of the industry.

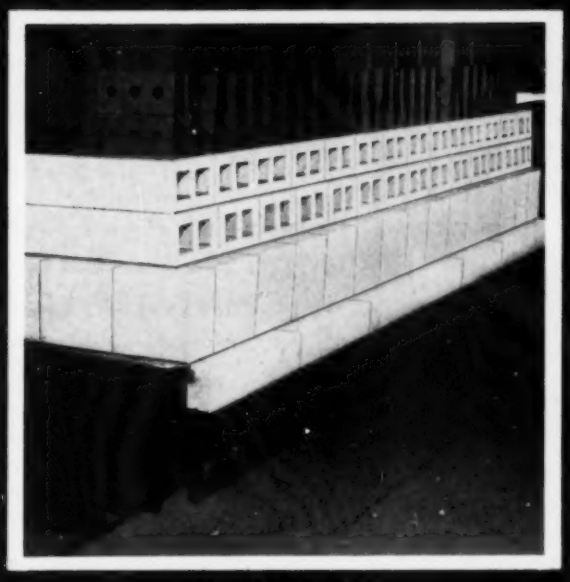
PACO

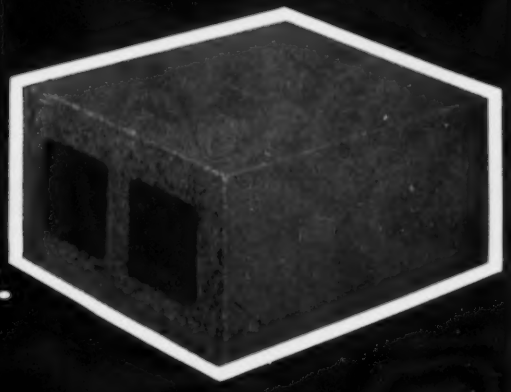
CAR TOPS

cut replacement cost by as much as 50%!

It's a fact . . . nine out of ten users of PACO CAR TOPS are satisfied customers—and all report replacement savings up to 50%! For the utmost in service, you require a good first quality car top, highly resistant to spalling, and a good hot load test . . . and you get just that when you standardize on PACO.

You and your plant can enjoy these increased savings simply by placing a trial order. There is a PACO engineer as close as your telephone . . . or write us direct for complete information.





Manufactured by

NORTH STATE PYROPHYLLITE CO., INC.

GREENSBORO, NORTH CAROLINA

Telephone CYpress 9-1441

OTHER PACO PRODUCTS INCLUDE: • PACO PLASTIC • PACOCAST • PACO H.T. CEMENTS • PACO FIRE BRICK MORTAR • PACO SIDE CAR BRICK • PACO FIRE BRICK • PACO LADLE LINING • PACO HEATZONE COMPOUND

STRESS-RELIEF OF OUTER PLIES MEANS LONGER BELT LIFE
"More Use per Dollar"

CONTROLLED PLY ELASTICITY

Note how Double-Compensation at right equalizes ply stresses.

1. Center plies on neutral axis and better protected carry more load.
2. Outer plies stress-relieved by adjusting to tension and compression.

RAY-MAN CONVEYOR BELT

hauls heavier loads...lasts longer

Aggregate for concrete pipe is handled at a rate of 1500 tons per day on this Ray-Man Conveyor Belt at a large rock product plant. This heavy duty belt has the easy troughability and wear resistance required to handle fuller, heavier loads. Cushioned strength members give resilience to impact *plus* flexibility to train naturally. R/M's exclusive "XDC" Cover gives a degree of protection against wear, tear, cuts and abrasion not possible with ordinary belts. Balanced double compensation relieves outer ply stress to prolong service life. Ray-Man requires no breaker strip, holds fasteners far better than other constructions.

Like all R/M heavy duty belts, Ray-Man is moisture resistant and mildew-proof. Look into the advantages of Ray-Man Conveyor Belt for handling brick, clay and other bulk materials at your plant. Check, too, R/M's extra-cushioned Homocord Belt for unusually abusive shock loading conditions . . . and R/M Tension-Master where extra long lifts at high tension are required. Write for Bulletin M302.

INDUSTRY'S *ONLY* COMPENSATED BELT

Ray-Man Compensation relieves outer ply stress . . . allows outside ply to elongate more than inner plies as the belt flexes around the pulleys. Inner plies no longer "loaf", but carry full share of the load.

Outer ply is better able to absorb strain and impact of loading, pull as a strength member, *protect* the inner plies, hold fasteners or splice longer.

And, because Ray-Man is *double Compensated*—both top and bottom plies stress-relieved—Ray-Man Compensation prolongs belt life, even where operated over reverse bend, snub or take-up pulleys!

RM 808

BELTS • HOSE • ROLL COVERINGS • TANK LININGS • INDUSTRIAL RUBBER SPECIALTIES

MANHATTAN RUBBER DIVISION — PASSAIC, NEW JERSEY

RAYBESTOS-MANHATTAN, INC.

Other R/M products: Abrasive and Diamond Wheels • Brake Blocks and Linings • Clutch Facings • Asbestos Textiles • Mechanical Packings • Engineered Plastics • Sintered Metal Products • Industrial Adhesives • Laundry Pads and Covers • Bowling Balls

VITRO CADMIUM SELENIUM COLORS

for structural clay products, enamels, glass and whitewares!

There's no doubt about it—these Vitro Colors are in a class by themselves. They offer unusually high chroma, are very stable at low temperatures, and will fire-out clean to provide high color values free of undesirable black spots. Because of their extra strength, they give more coverage per pound —materially reduce production costs.

Vitro Cadmium Selenium Colors are available in many shades from lemon yellows through oranges to brilliant reds. Also, they can be used to produce a very nice maroon, and at reduced percentages give beautiful pastels.

If you have any doubts about the superiority of these Colors by Vitro, ask anyone who has ever used them. Or, write today for samples to test in your own plant.

VITRO MANUFACTURING COMPANY

60 Greenway Drive, Pittsburgh 4, Pa.

A Division of Vitro Corporation of America, West Coast Plant:

1625 West El Segundo Blvd., Compton, Cal.

Colors by Vitro

TRI Hears Progress On Depletion

Attorney Kenney reports progress in depletion cases. Bob Knauft to chairman the next operator's meeting. George Puls, Oscar Miller and Cliff Taylor join honorary ranks.

The regular fall meeting of The Refractories Institute was held at Point Clear, Alabama Oct. 8-9. J. B. Arthur, founder of Mexico Refractories Co. and president of The Refractories Institute, conducted the two day affair.

William Lowe, A. P. Green Fire Brick Co., announced that three new members have been appointed to the honorary ranks of membership. They are George Puls, retired from Acme Brick Co., Ft. Worth, Texas; Oscar Miller, formerly Pyro Refractories Co., Oak Hill, Ohio; and Cliff Taylor formerly of Charles Taylor Sons Co., Cincinnati. Other members with honorary membership are W. B. Coullie, J. L. Crawford, J. C. Evans, H. B. Plunkett, W. J. Westphalen and J. D. Ramsay.

Cunningham Speaks

Speaker for the first morning's session was Mitchell Cunningham of the Alabama State Docks Department.

He traced the development of the port of Mobile, telling how it grew from a 10 to a 40 million dollar project. He said that revenue from the docks was approximately $1.08 per ton for dockage charges, 47c per ton for elevator, if used, and 35c a ton for ore. He told in detail of their crating department for refractories. This department does about 80% of its business for the refractory industry. The crate that they make holds 300 standard fire brick. The fire brick is shipped into Mobile loose in cars and it is packaged there. The package was developed with the cooperation of the industry. The brick are crated in the cars and the crates are lifted then to the dock and into the boats. Charges for the crate are $4.10.

Three Types Made

There are three types of crates made, a standard crate which holds 300 brick or approximately one ton, the deluxe crate which has extra strapping on it and, the special crates which are built for tank blocks. The docks handle approximately 1000 cars of fire brick per year, besides much fire clay. Fire clay is handled for 30c a ton and 25c a ton wharfage. The dock also handles inbound chrome and bauxite and can handle approximately 10,000 tons in 27 hours.

He stated that $9.08 per ton is left in Mobile from fire brick shipments.

On the second day it was announced that Bob Knauft would conduct the next operator's meeting and it would be held in Ashland, Kentucky. Visits may be made to Ironton Fire Brick Co., Ironton, Ohio; Chas. Taylor Sons at South Shore, Ky. and Davis Fire Brick Co. in Oak Hill, Ohio.

William J. Kenney, TRI General Counsel, reported on the progress of percentage in depletion.

He stated that the Revenue Service had recently taken the position that the cut-off point of percentage depletion of refractory clays is to be measured on a national basis at crude clay and the value of the clay at this point is to be determined on local market values or, in the absence of a market, by the proportionate profit method. This is wholly unsatisfactory to the refractories industries.

The 7th and 8th Circuit Courts in the Cannelton Sewer Pipe and Iowa Limestone cases have held that the commercial market for clay is to be determined locally and local markets for clay do not establish a cut-off point or a value unless the particular taxpayer's costs are such that he could have sold his clay in that market at a profit. This was followed by the lower Courts in the Sparta Ceramics and Pacific Clay Products and Standard Clay Products Co. cases, all of which are currently pending appeal by the government.

Review Dixie Case

Kenney reviewed the recent decision in the Dixie Fire Brick case allowing depletion on clay processed into burned refractory products on the basis of $14.40 per ton arrived at from the average selling price of milled clay by Dixie.

He advised that six "end product" suits had been filed by the members of the refractories industry and that this litigation had been forced upon the industry because of the failure of the Revenue Service to arrive at any reasonable basis for depletion or to honor their prior understandings, thus leaving most taxpayers' returns open since 1951.

W. A. Turner reported for the Mellon Institute committee. All activities of the Refractories Fellowship, he said, are important. The staff of seven is fully occupied and the work they are doing is indispensible.

It was announced that the next TRI meeting will be May 5th and 6th at the Homestead in Virginia.

The TRI Gang's All Here

J. Rickey
G. Needham
L. Sims
G. Brush

W. Kenney
J. B. Arthur
A. Newton

H. West
W. Tredennick
J. Brinckerhoff
E. Valensi
H. Lee

M. McLain
N. Kent
F. Laube
H. Hopwood
H. Lers

G. Campbell
W. Schweckardt

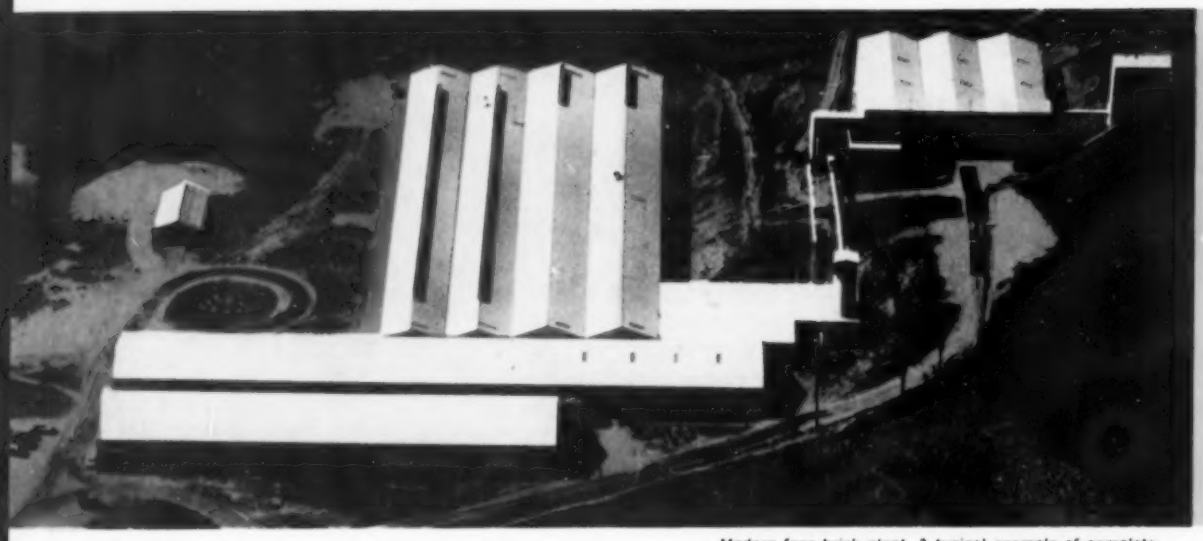
L. Greene
W. A. Turner
R. Barr

E. Valensi
L. Sims
M. Hopwood
H. Hopwood

M. Hopwood
R. Newton
H. Schweckhardt
F. Turner

L. Ullom
C. Garber
M. Rhodes
N. Leach

Swindell-Dressler



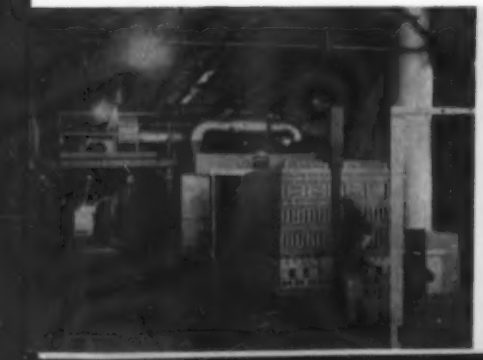
Modern face brick plant. A typical example of complete engineering service provided by Swindell-Dressler.

Plant Engineering

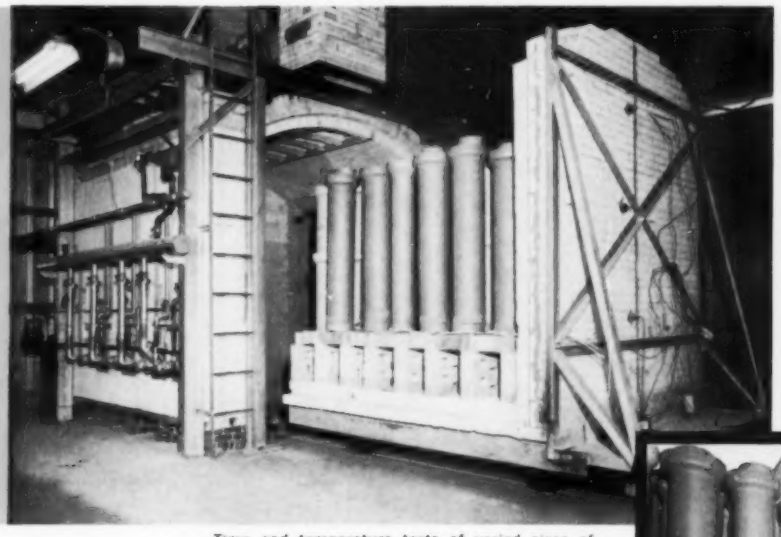
Swindell-Dressler Corporation provides complete service in plant layout, design and construction supervision for the ceramic industries.

Based upon specialized experience and knowledge of the industries' requirements, our engineering service is offered typically in three basic phases—ranging from preliminary studies that bring together sufficient data and cost estimates to present a clear over-all picture of the proposed project, through completion of finished plans and specifications for the proposed plant and equipment installations, to management of the entire program including the securing and evaluation of bids, purchasing, payment of the bills and supervising the performance of the contractors. Thus the client is relieved of all coordination activity, purchasing problems and the numerous other details that are an inherent part of any construction program.

Swindell-Dressler Corporation engineers are specialists in the revamping and rehabilitation of existing facilities and equipment for improving the product and reducing labor costs. Operations are carried out at a minimum of expense, with maximum efficiency and without interfering in any way with normal plant operation.



serves progress in heavy clay products



Time and temperature tests of varied sizes of clay pipe, in special design Dressler Shuttle Kiln.

The problem of black-coring finds specific solutions through Swindell-Dressler research for the customer.

Research and Development

Swindell-Dressler Corporation maintains an extensive program of research and development for the improved production of ceramic products. Work is being conducted currently on the fast firing of heavy clay products, lightweight clay units, and low-cost clay calcining. We offer to our clients facilities ranging from laboratory evaluation of raw materials to the *full-scale* study of product firing requirements, with time and temperature determination made in full-size test kiln units. Our studies in the rapid firing of lightweight structural clay products have produced much information of value to manufacturers entering this high-potential field.

You are invited to discuss with Swindell-Dressler engineers all aspects of our services in relation to your forthcoming production requirements. Write, phone or wire, without obligation.

Initial studies in producing calcined clay in powder form lead to Swindell-Dressler calcining units that will meet the needs of clay plants of all sizes—compact, productive and low in cost.

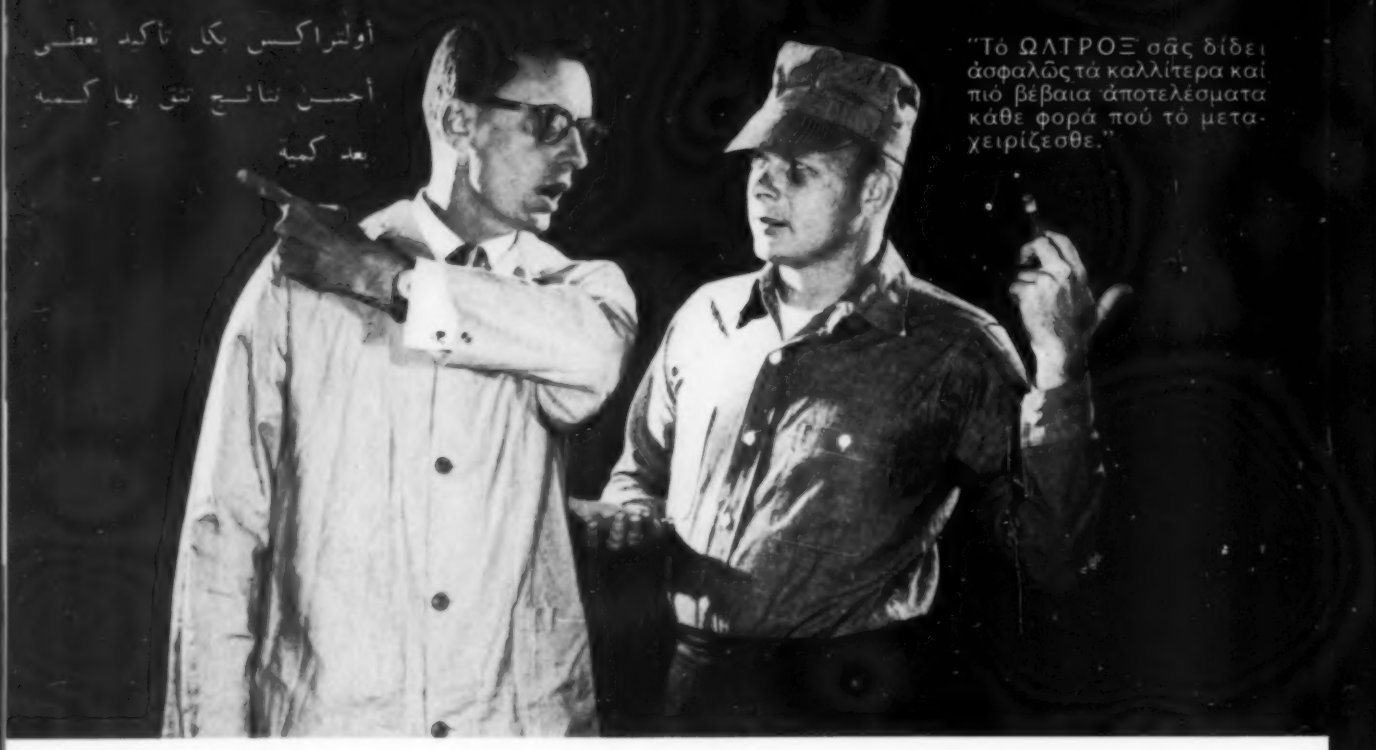
SWINDELL-DRESSLER CORPORATION

ENGINEERS AND MANUFACTURERS • PITTSBURGH 30, PA.

The Swindell-Dressler Corporation of Canada, Ltd., Ottawa, Canada

Though the language is different
LAB and PLANT agree on

OPACIFIER UNIFORMITY



You might not think so. From the lab come measurements of diffraction, refraction and reflectance. In the plant, it's either "OK" or it isn't. But that "OK" reflects a well-developed ability to evaluate all the factors of uniformity that affect production performance.

The final "word" is the same, though, from both the men who run opacifiers through formal tests *and* the men who judge their day-to-day plant performance.

It is "ULTROX" —appreciated for its UNIFORMITY and thoroughly predictable performance. These essentials for uniform glazing have been built into this zirconium opacifier by M&T's own lab and plant men.

One of three grades can provide the optimum in performance and economy in each of *your* glaze formulations. Available at no obligation is the help of M&T's ceramic engineers, backed by data on thousands of successful glaze formulations.

ULTROX®

Unusually uniform, ultra-high-opacity zirconium silicates manufactured specifically to give evenness of color and finish in ceramic glazes.

ULTROX STANDARD—For all colors and most whites. The "standard" in the trade.

ULTROX 500W—For strong whites and pastels and special covering problems.

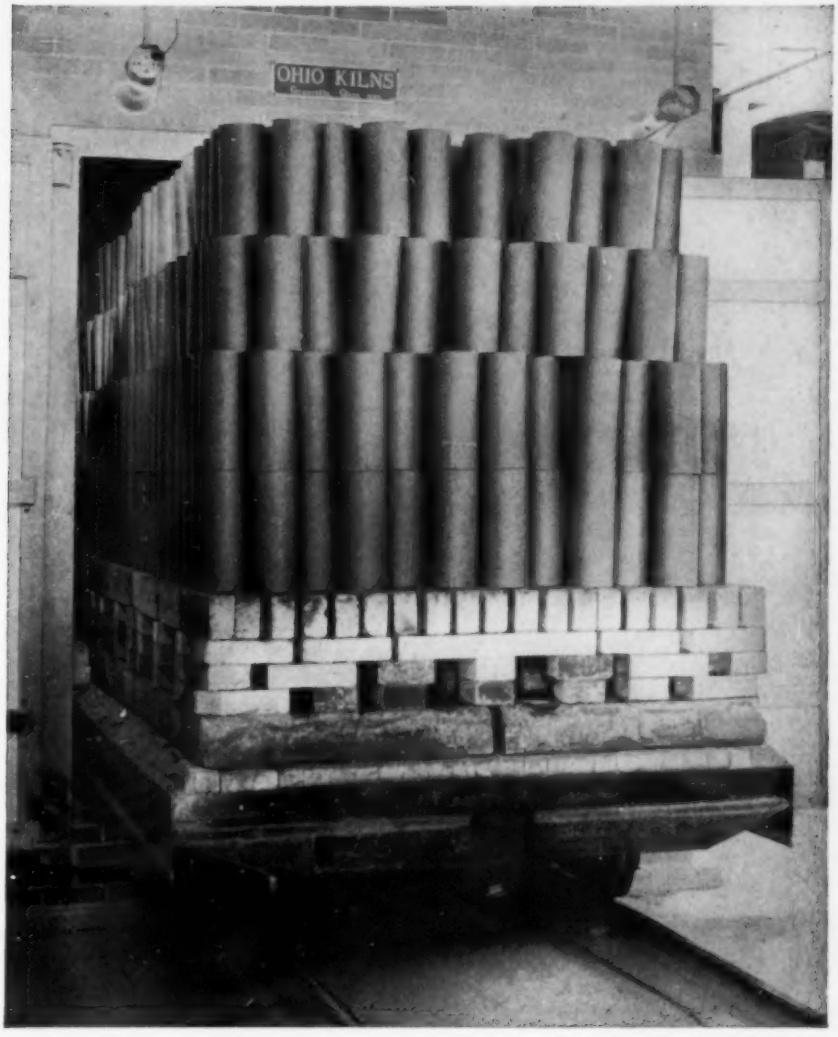
ULTROX 1000W—For ultra-whites to match white enamel fixtures.

VIRFLUX* VIRGINIA RUTILE · TIN OXIDE
ANTIMONY OXIDE · SODIUM ANTIMONATE · ZIRCON
*Trade Mark

M&T Chemicals

METAL & THERMIT CORPORATION
General Offices: Rahway, N.J.

Refractory concrete car tops last longer



At Orville Tile Company (Orville, Ohio), car tops are cast in place with refractory concrete made with Lumnite calcium-aluminate cement and suitable aggregates. Such car tops will withstand high heat and retard the flow of heat down to the steel framework of the car. Refractory concrete tops offer high resistance to thermal shock. Spalling and cracking are minimized. And they are easy and economical to install, using plant labor and equipment. Concrete will reach service strength in 24 hours.

For added convenience, there are castables bonded with Lumnite cement. These are packaged mixtures, ready for use with the addition of water. Just mix and place. They are available from leading manufacturers of refractories. For additional information, write Universal Atlas Cement, 100 Park Avenue, New York 17, N. Y.

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Division of
United States Steel

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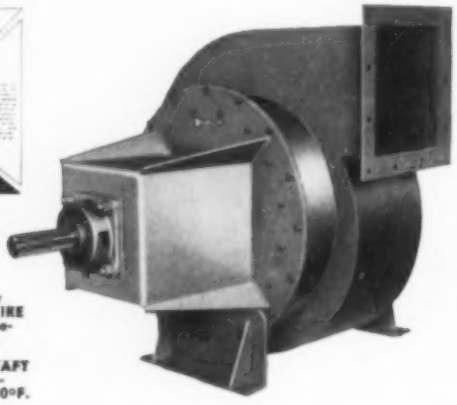
A completely NEW line!
GARDEN CITY

RF
THERMAL-AIRE FANS

- **simple to install**
- **inexpensive to maintain**
- **temperatures to 1850°F.**

Garden City's new RF THERMAL-AIRE radial blade fans are durable, trouble-free, efficient. Modern, simplified in design, they are "tailored" for various temperatures to precisely meet your needs.

CERTIFIED RATINGS
AUTHORIZED BY AMCA



Garden City THERMAL-AIRE Fan, Arrangement No. 2, with AIR-COOLED SHAFT for temperatures to 1700°F.

—WRITE TODAY!

Garden City Fan Company
801 North Eighth Street
Niles, Michigan

Send me fully illustrated information on application checked below:

- ☐ **THERMAL-AIRE fans for moving air or gases at elevated temperatures.**
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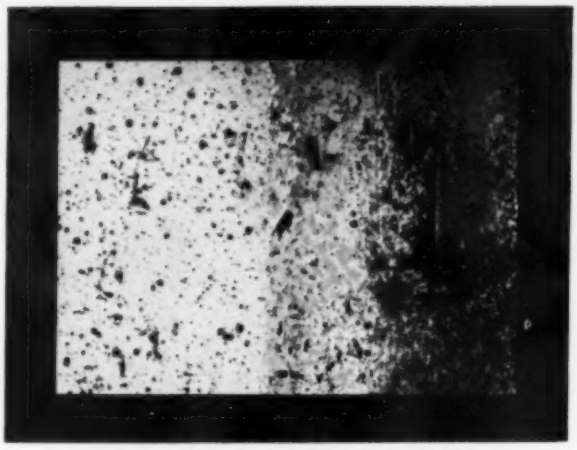

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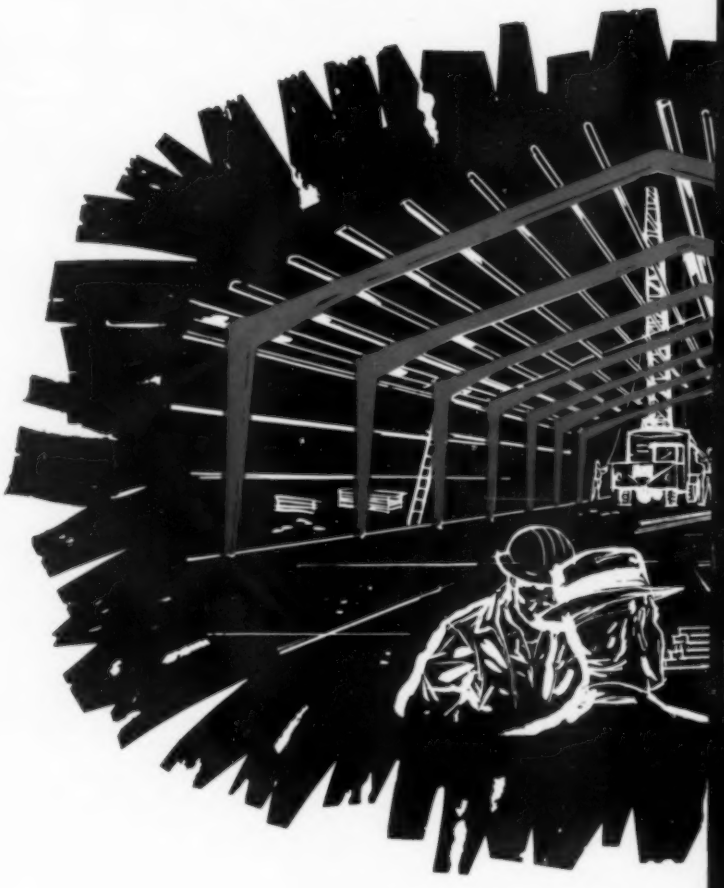

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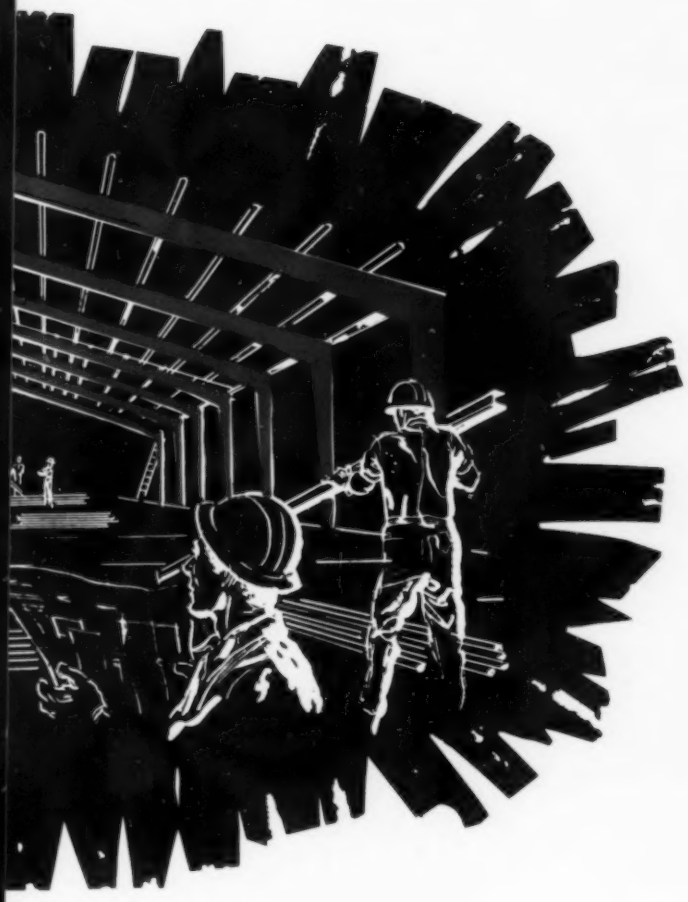

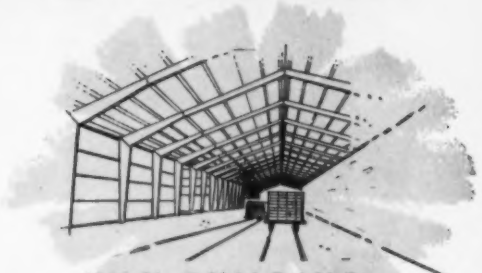

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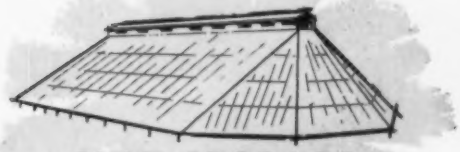

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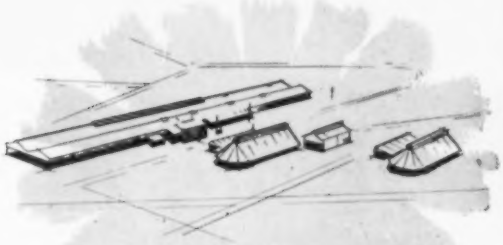

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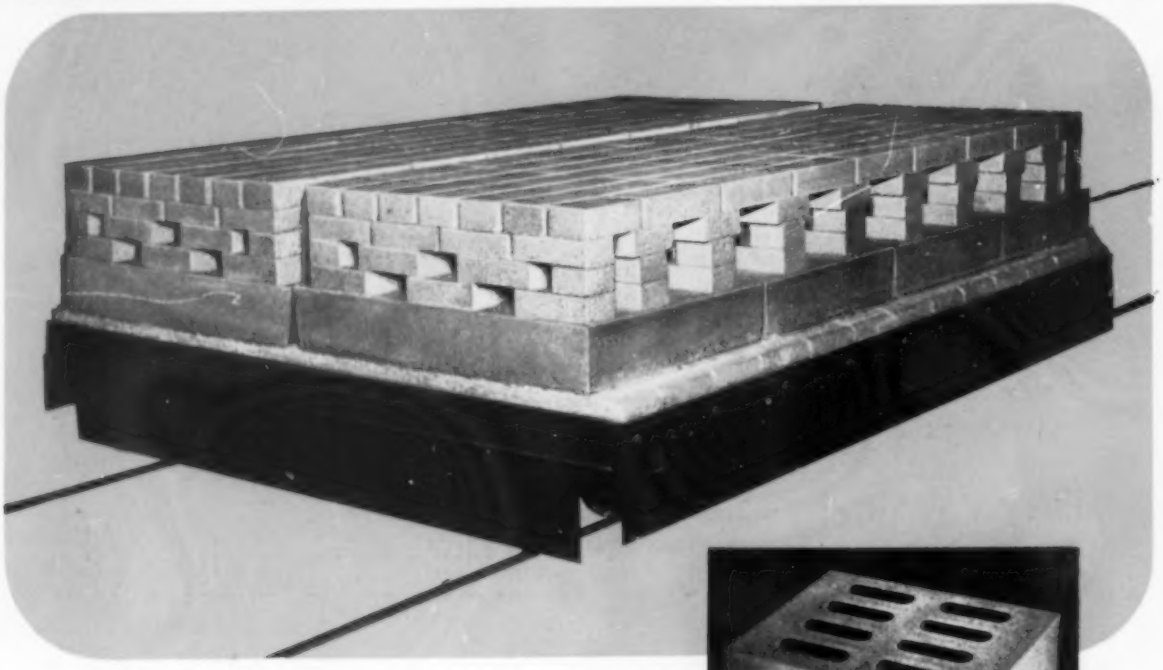

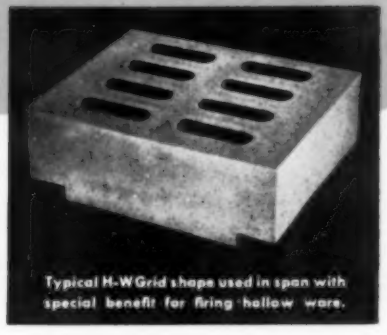

Typical H-W Grid shape used in span with special benefit for firing hollow ware.

Helps in achieving
FULLEST ADVANTAGE OF UNDERFIRING

Many of the advantages resulting from tunnel kiln underfiring, such as uniformity of burn, high efficiency and minimum breakage, to a large degree are dependent upon car-top refractories.

Through extensive research and experience, Harbison-Walker Spanner Tile have been developed for the special requirements of the underfired car top construction. The dependable service they render in kilns used for firing face and common brick and sewer pipe at temperatures up to 2200°F. is attributable to certain enhanced physical properties. Most important among these are high transverse strength and excellent spalling resistance. Spanner Tile are very resistant to bending, cracking and spalling.

Accessory refractories which contribute to the excellent results secured from car tops of this construction are H-W Castables and deck shapes for the base and H-W pier brick possessing unusual high temperature compressive strength in soaking heat. Of similar importance is the H-W Bonding Mortar having the ceramic set which provides the most desirable temperature-change flexibility.

The many different requirements for widely diversified tunnel kiln operations are fulfilled by Harbison-Walker Car Tops of designs especially suited for particular conditions. They are made in various kinds of refractories, such as high duty and super-duty fire clay, high-alumina and silica.

Write for prices and complete information on Harbison-Walker Car-Top Spanner Tile.

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Technical session, Refractory Division, Bedford Spring Hotel.

Cermets-Castables Discussed At Bedford Meeting

Glass house refractories highlighted the papers presented to the members of the Refractories Division of the ACS meeting at the Bedford Springs Hotel in Bedford, Penna. Oct. 8-9. More than 300 people were registered at the meeting. Papers on castable refractories and reactions at high temperatures also received a lot of attention from the members of the Division.

The "early bird" cocktail party was held on Thursday evening preceding the opening of the meeting and was well attended. Morris L. Woolridge, Owens-Corning Fiberglas Corp., was the first speaker on the program Friday and gave a paper entitled "Some Observations on the Behavior of Chromic Oxide Refractory in Glass. He was followed on the program by Thomas S. Shelvin from Ohio State University, Shelvin's paper was "Cermets and Toughness". He recounted how in the laboratory a sandwich of alternating layers of Nickel and Titanium Carbide were built up to form test pieces with tensile strengths of 43,000 lbs. when measured at 2,000°F and which were able to withstand a shock load of four times the standard for unreinforced ceramic material.

The third paper "Some Observation on Explosive Spalling of Refractory Castable Bonded with Calcium Aluminate Cement" was given by Leroy D. Hart. The co-author of this paper was Walter Gitzen. Both men are with Alcoa. It was concluded that explosive dangers of castable refractories can be lessened by being sure that the casting cures at a relative high ambient temperature, by decreasing amounts of cement if this can be tolerated and using more water in the mixture.

The second Technical Session was under the chairmanship of Thomas S. Shevlin. Three papers were presented. The first "Creep Testing of Refractories" was by James Blackwood and Kenneth A. Bab. The latter read the paper. Neal Troy from Owens Illinois told how a small test furnace had been built to duplicate operating conditions in a glass tank or checker in order that a comparitive test of different brands and different types of glass house refractories could be tested under controlled conditions

and with a minimum of elasped time. His paper "Development of a Laboratory Test for Refractories to be Used in Glass Tank Regenerators and Checkers" was illustrated with slides showing both construction of the test equipment and the test results on several different kinds of brick.

Motion pictures taken from a rocket as it passed from Cape Canaveral to the down range target areas some 1500 miles away were shown as part of the paper given by Louis McCreight of the Aerosciences Laboratory of the General Electric Co. The paper "Behavior of Materials at High Temperature" also had motion pictures of different shapes and materials as they were destroyed in the plasma of a high energy electrical discharge.

The annual golf match was won by Dick Stevens who had a low score of 73. Other social activities were the Banquet and dance. The ladies attending the meeting were entertained at a luncheon.

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The International Type Vibrating Dry Press. All welded construction. Vibrating mechanism of the mechanical type. Although all motions of press are actuated by hydraulic means brick or shapes are not made by hydraulic pressure, only by pure vibration. Press made in 2-mold and 4-mold sizes.

Also new International Hydraulic Toggle Dry Press for face brick, refractory brick and shapes. Write for descriptive literature and prices.

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This plant means more efficient service and, as a shipping point for other NP & M products, quicker delivery for our customers in the West and Southwest. It represents another step in our expansion program designed to meet the increasing demand for our wider range of products. Those listed here are all immediately available and will be milled to your requirements.

Our consistent growth over the past 65 years is a measure of the personal service you may expect from us as well as the quality of our products.

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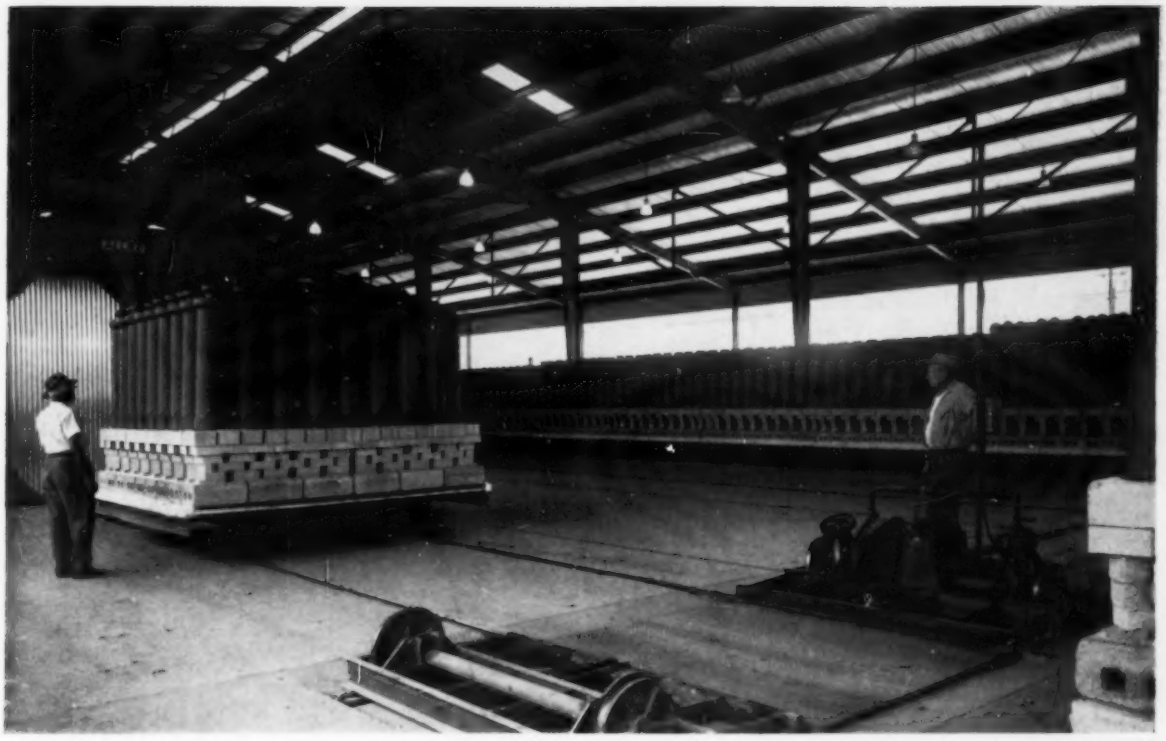

Corona plant kiln foreman Roland Hughes (left) inspects six-ton load of pipe which has just been pulled from tunnel kiln by winch operator Olin Spoonhour.

Automation Key To Production Records At Gladding McBean's New Plant

Now in full production, the newest of Gladding McBean's nine West Coast manufacturing plants is the $5 million vitrified clay pipe plant located some six miles southeast of Corona, California. In a little more than a year this outstanding manufacturing operation has already achieved the highest standards of production efficiency and product quality control in the firm's history.

Reputed to be one of the world's most modern and highly automated pipe manufacturing plants, it is the latest example of the pioneering spirit that has made "Gladding McBean" one of the most respected names in western industry.

Compared with the company's original plant which opened for business in Lincoln, Calif., in 1875, the size and scope of the new facility sharply dramatizes the growth of the now 83-year-old organization.

Whereas the modest Lincoln plant consisted of but one frame shed, one 18′ diameter beehive kiln, a pipe press, a few dies, a set of roller crushers, an engine and a pump, the new Corona plant's cluster of modern buildings contains over 200,000 square feet of floor space—every square inch laid out and engineered to make maximum use of automatic equipment.

Combining the firm's proven production methods with newly developed automation techniques, the new plant was designed jointly by Gladding McBean's Production and Engineering Departments in conjunction with Holmes & Narver, Inc., Consulting Engineers and Architects. H. C. Smith & Meyers Brothers served as general contractors on the project.

The newest advances in automatic controls and operating procedures incorporated in the layout have streamlined the manufacture of vitrified clay pipe to new peaks in production efficiency. For instance, mixing and grinding operations are now almost completely automatic.

There are four basic operations involved at the Corona plant in the fabrication of finished large-size pipe from raw clay—mixing, grinding,

Copy continued on page 111

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Available on order from the publishers of CERAMIC DATA BOOK, CERAMIC INDUSTRY, BRICK AND CLAY RECORD, other business papers and technical literature

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Specially designed tunnel kiln is largest of its type in the world. It is 420 feet long and 10 feet wide. View of north side of kiln shows a portion of burner and piping system.

Shown here are two of the eight 40-foot diameter "Beehive-Type" periodic kilns used by Gladding McBean at its Corona plant for firing large diameter—up to 42 inches—sewer pipe. Five-foot joints can be stacked two and three high in these kilns. Fourteen Schurs nozzle mix, dual fuel (gas or oil) combination burners are equally spaced around each of these circular kilns.

Continued from page 109

pressing, drying and firing. Gladding McBean's Corona plant has achieved its pace-setting position by effectively streamlining each one of these formerly cumbersome production phases.

First, the major portion of the clay used in the production of their high-quality sewer pipe is mined in their own back yard from the natural deposit of Bedford red burning clay. (This deposit is estimated to contain millions of tons of top grade clay—enough to supply the new plant's needs for many decades.)

Next, the mined clay is stored in four large hoppers. Under the four hoppers, each of which is filled with a different clay, are electronically controlled vibrating feeders geared to automatically discharge the proper amount of each kind of clay onto a common conveyor belt.

The clay is then carried to a large dry pan where it is ground and passed through vibrating screens. Pieces too large to sift through the screens are returned to the dry pan for further grinding. The screened clay is next transported via a 700 foot conveyor belt system to one of seven 150-ton storage bins to await use in the pressing room. The almost completely mechanized grinding and storing operation is controlled by just one man operating a master control board.

Next, during the pressing operation, the entire extrusion process is also handled by a single operator from a control board located beside the pugmill. All off-bearing and trimming operations are automatic, and make it possible to set up and maintain a production rate of six pieces of 8" diameter sewer pipe 40" long per minute—or one piece every ten seconds.

After pressing, the clay pipe sections are then transported by lift truck to one of the sixteen dryer rooms where natural gas is used to reduce the moisture content from approximately 20% down to 2%. Each of the dryer rooms is 30' wide and 122' long. Prior to firing, the newly pressed pipe is placed in one of these rooms to be hot air treated at temperatures ranging from 90 to 240 degrees Fahrenheit.

The dryer rooms are heated by 27 specially designed air heaters each

Continued on page 112

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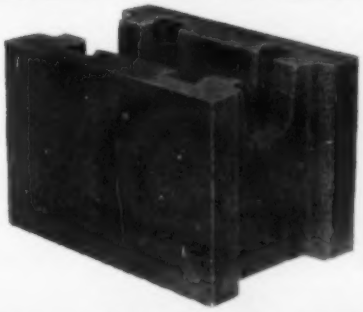
Moldit castable is poured into openings in the top course of BLOK. Castable flows smoothly down and to the right and left, filling and bonding all the BLOK. No individual bonding of the BLOK is required.

MONOLITHIC WALLS AND ARCHES AT DRASTIC SAVINGS IN TIME AND LABOR

FURNACE BLOK*



Furnace Blok (9" x 13½" x 13½")
Equals the Volume of 16 Firebrick.
Many types and sizes offered.

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Extra large Discharge Door in Pan Bottom, operated with Air-pressure.

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For STRUCTURAL CLAY PRODUCTS, REFRACTORIES, ELECTRICAL PORCELAIN, TILE AND CHINAWARE—as well as for many new items such as found in the ELECTRONIC, MECHANICAL, TEXTILE, METAL-WORKING, REFRACTORY AND MISSILE CERAMIC FIELD OF TODAY.

The versatility and adaptability of the muller-mixer principle has gained wide acceptance, and in many cases has replaced former processing systems of material preparation.

A PRODUCT OF International CLAY MACHINERY OF DELAWARE, INC.

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Continued from page 111

of which includes a Model 214-7 North American Dual Fuel combination gas or oil fired unit of over 1,000,000 B. T. U. capacity. Each heating unit automatically supplies the hot air as needed to maintain the temperature and drying cycle required.

Wesley Barnes and William Solaini of J. T. Thorpe, Inc., Los Angeles, worked closely with Homes & Narver and Gladding McBean planners to design this special heating equipment for installation on the roof, thus saving valuable floor space. As engineered and constructed by J. T. Thorpe, Inc., North American Burner Distributors, the hot air is forced by fans from roof-mounted units through a very short overhead duct system into the dryer rooms and down through ware to be dried. Each unit is equipped with its own combustion blower, spark ignitor, Minneapolis Honeywell draft switch, air and gas pressure safety controls.

Highly automated, a motor-actuated North American vari-port valve, in conjunction with a series of 18 cross connected North American regulators, accurately modulates and proportions the flow of air and gas to the operator to control the time temperature cycle within the close limits required for the various sizes of pipe manufactured at the Corona plant.

By means of cam operated controls, the drying cycle can be varied from 32 hours, as required for the 4", 6" and 8" diameter pipe, to a maximum drying time of 144 hours for the 21" to 24" 5-foot sections of pipe. Lucite cams make it possible to accurately control and duplicate the most desirable drying temperatures and heating rates for each size pipe handled.

The speed-up in drying time realized through the use of these well designed units not only saves valuable production time, but permits important flexibility in production scheduling and smaller inventories.

After the pipe is dried it is then loaded on giant 10' x 10' tunnel kiln cars, or it is taken out to one of the eight 40-foot diameter "Beehive" periodic kilns for the next phase in the manufacture of vitrified pipe: firing.

Continued on page 113

Continued from page 112

The Corona plant kiln equipment is considered to be excellent. The tunnel kiln measures approximately 10′ wide by 420′ long. Ed Dietterle of the Allied Engineering Division of the Ferro Corporation, Los Angeles, worked closely with Gladding McBean people in process of designing this huge unit to meet Corona's specific needs. J. T. Thorpe, Inc., did the steel and brick work not only on this unit but also on the eight giant 40′ diameter beehive Kilns, which also qualify as the largest of their type.

Each of the beehive kilns is equipped with 14 Schurs nozzle mix, dual fuel (gas or oil) combination burners equally spaced around each circular kiln. Thus, firing can be accurately controlled during the cycle when temperatures up to 2,100 degrees Fahrenheit are reached. Large diameter, 5-foot lengths of pipe can be stacked two and three high in these giant periodic kilns. The largest currently being made has a 42-inch diameter and comes in 5-foot lengths weighing approximately 3,200 pounds each.

A complete, gas-fired North American combustion system has been installed with the Allied tunnel kiln. The new kiln design, with 10′ x 10′ cars and this efficient combustion system, makes it possible for Gladding McBean to reduce its gas fuel input per ton of finished material by 10% compared to its other locations.

Forty cars comprise a normal tunnel kiln load. As a car loaded with unfired pipe is put into the preheat end of the kiln, a fired load of pipe is removed from the outlet end after approximately 44 hours of normal firing time. Remote controlled, the operation is another example of how automation is taking its place in industry.

Air Gas Flows Proportioned

The tunnel kiln is equipped with 60 Model 212-3 North American Dual Fuel (gas or oil) nozzle mix burners. Of these, 38 are in the 70 foot firing zone and 18 are in the 50 foot preheat zone for use in normal firing.

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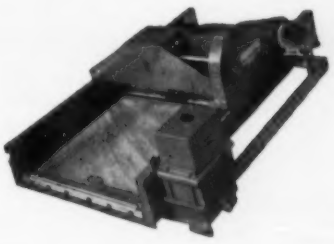

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- Exclusive differential vibration that snaps wedging particles loose 1600 times per minute.
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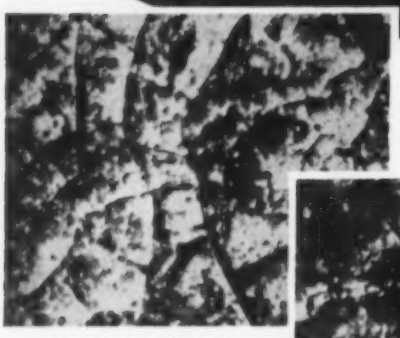

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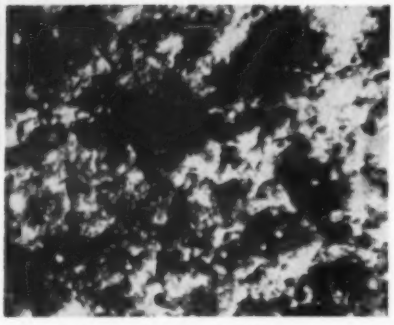

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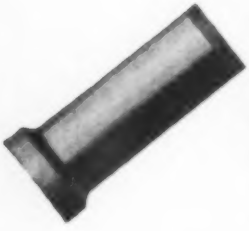
for a better glaze at less cost...

RASORITE® Sodium Borate Concentrates



Improve your salt glaze, lower your costs—it's easy with RASORITE! This product is cheaper than either Borax or Boric Acid, yet it gives equally fine results. Use RASORITE to make your glazes more durable, more impervious to liquids, more uniformly free of crazing. Get the benefits of a borate-salt mixture—in lowered fuel costs, increased production and profits. Write today for details and technical data sheets.

MANUFACTURERS OF FAMOUS "20 MULE TEAM" PACKAGE PRODUCTS

United States Borax & Chemical Corporation

50 Rockefeller Plaza, New York 20 630 Shatto Place, Los Angeles 5

Air and gas flows are accurately proportioned and separately piped to where they mix within each burner close to the tip. Automatic controls provide precise atmosphere and firing rates. Further automation is seen in the four and six-inch thermostatically actuated North American Vari-Port valves which supply combustion air at 32 ounces.

A cross-connected series 18-6 and an 18-4 North American Regulator system accurately control the gas flow at 16 ounces pressure to the individual burners. The air and gas controllers are zoned with the firing zone on the larger air-gas system and the preheat zone on the smaller air-gas system. Proportioned air enters each burner through the right-hand piping system, passing through each two-inch blast gate, then horizontally across into the burner nozzle where it mixes with the proper volume of gas before firing into the kiln firebox. Gas enters the burner through the left-hand piping system, passing upward through the adjustable orifice valve and back down through the flexible metal base into the burner.

Gas pressure can be checked at the stopcock connection below the tee on the left-hand piping system. Delicate adjustments, if needed, can be made through an adjustable orifice to initially balance the kiln. Air pressure can also be checked ahead of each burner at the stopcock connection directly below the air blast gate and ahead of the 90 degree elbow on the right-hand piping system. Air adjustments can be made by blast gate setting at this point to initially balance the kiln.

Natural gas with a heat content of 1,100 B.T.U. per cubic foot, supplied by the Southern California Gas Company's Eastern Division, is the main fuel for the Corona Plant. Approximately 50,000 cubic feet of gas is now used each hour. Mr. Homer Dye, General Superintendent of the Corona Plant, and a veteran of more than 20 years in the ceramic business, states, "This economical, clean-burning fuel adapts itself most favorably to the accurate time-temperature cycle which must be maintained in all the kilns and dryers to insure a high quality product.

Let the Rockfacer *

- Double the textures of brick you offer, without increasing inventory
- Turn your culls into No. 1 premium brick
- Save money on rockface costs over hand methods
- Increase mark-up with rockfaced texture, at negligible cost
- Get fast production — 2000 bricks per hour
- Produce another new product to sell — BRICK CHIPS for road or roof chat, at no cost to you

HUNDREDS OF BRICK PLANTS enthusiastically endorse "Rockfacer" (names furnished on request).

U. S. PATENT NO. 2,801,626 FOREIGN PATENTS PENDING

Send samples of your brick to be test-rockfaced for your inspection by. . .

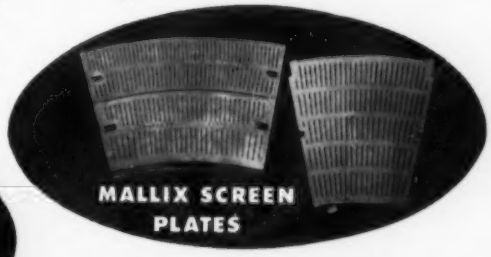
ROCKFACER COMPANY

503 Hickory Tree Rd. (P. O. Box 547), Mesquite, Texas, ATlantic 5-6316

USE MALLIX SCREEN PLATES and GRATE BARS

for Outstanding Performance...

● Mallix plates and bars are made from a specially heat-treated material. Tough but not brittle, they stand up under severe service without breaking—will outlast all ordinary types. A-5503



MALLIX SCREEN PLATES

Since Mallix plates are harder and stronger than most, slots can be more closely spaced. Uniform sizing is assured by their smooth, clean openings. Their tapered slot design keeps material flowing freely.

for sintering of

LIGHT-WEIGHT CONCRETE AGGREGATE

MALLIX FINGER BARS

MALLIX GRATE BARS

Mallix finger bars give uniform air distribution and have excellent self-cleaning properties. Can be furnished for any desired slot openings.

Tough Mallix grate bars will give you economical grate bar cost per ton of light-weight concrete aggregate. Straight slot, pinhole or herringbone type bars are available.

NATIONAL Products FOR TRANSPORTATION AND INDUSTRY EST. 1888

NATIONAL MALLEABLE and STEEL CASTINGS COMPANY

CLEVELAND 6, OHIO

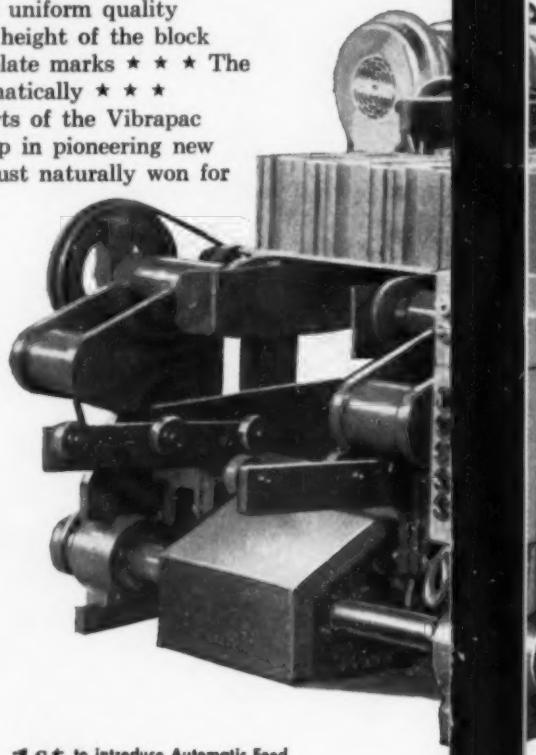
SCREEN PLATES • GRATE BARS • PALLETS • PALLET WHEELS • PALLET SIDE PLATES • PUG MILL BLADES

BESSER

VIBRAPAC

World Famous Concrete Block Machine

The Besser Vibrapac is the culmination of more than a half century of engineering and production "know-how." Highly regarded throughout the Industry, this dependable machine supplies blockmakers with a completely engineered system of producing building units by AUTOMATION ★ ★ ★ The *Automatic Feed Control* produces block of uniform quality and density ★ ★ ★ *Automatic Height Control* accurately regulates the height of the block ★ ★ ★ The new *Besser UPT* (Uni-Pressed Top) eliminates ALL core plate marks ★ ★ ★ The exclusive *Besser-Matic* loads green block and unloads cured block, automatically ★ ★ ★ The Besser system of *Automatic Lubrication* means that all moving parts of the Vibrapac are lubricated while the machine is in operation ★ ★ ★ Besser leadership in pioneering new concrete block machines and improving plant production methods has just naturally won for the company the No. 1 position in the Industry.



1st to produce all types and sizes of block on one set of Plain Pallets, instead of using numerous cored pallets.

1st to apply the cam roller system of power application, thereby delivering power with pin point precision and with steady uninterrupted regularity.

1st to offer service in furnishing suggested plans for most economical and efficient plant layout.

1st to offer new block designs to architects and builders for above grade construction.

1st to develop and build a Power Off-Bearing Hoist to eliminate block lifting by hand.

1st to introduce Cubing for fast lift truck transportation and fast truck loading.

1st to use two 10 h.p., high starting torque motors, for maximum vibration force to obtain dense weathertight block.

1st to produce batter block for manholes, on production basis, with same speed as conventional block.

1st to introduce Automatic Lubrication, thereby permitting Vibrapac to lubricate itself at regular intervals, while it is running. Saves labor, parts and maintenance.

1st to use 2000 pounds pressure on block during finish vibration.

1st in the industry to erect concrete masonry exhibits at Architects' Samples Corporation, New York and National Housing Center, Washington, D.C.

1st block machinery manufacturer to advertise block in architectural and building publications including Sweets Architectural File.

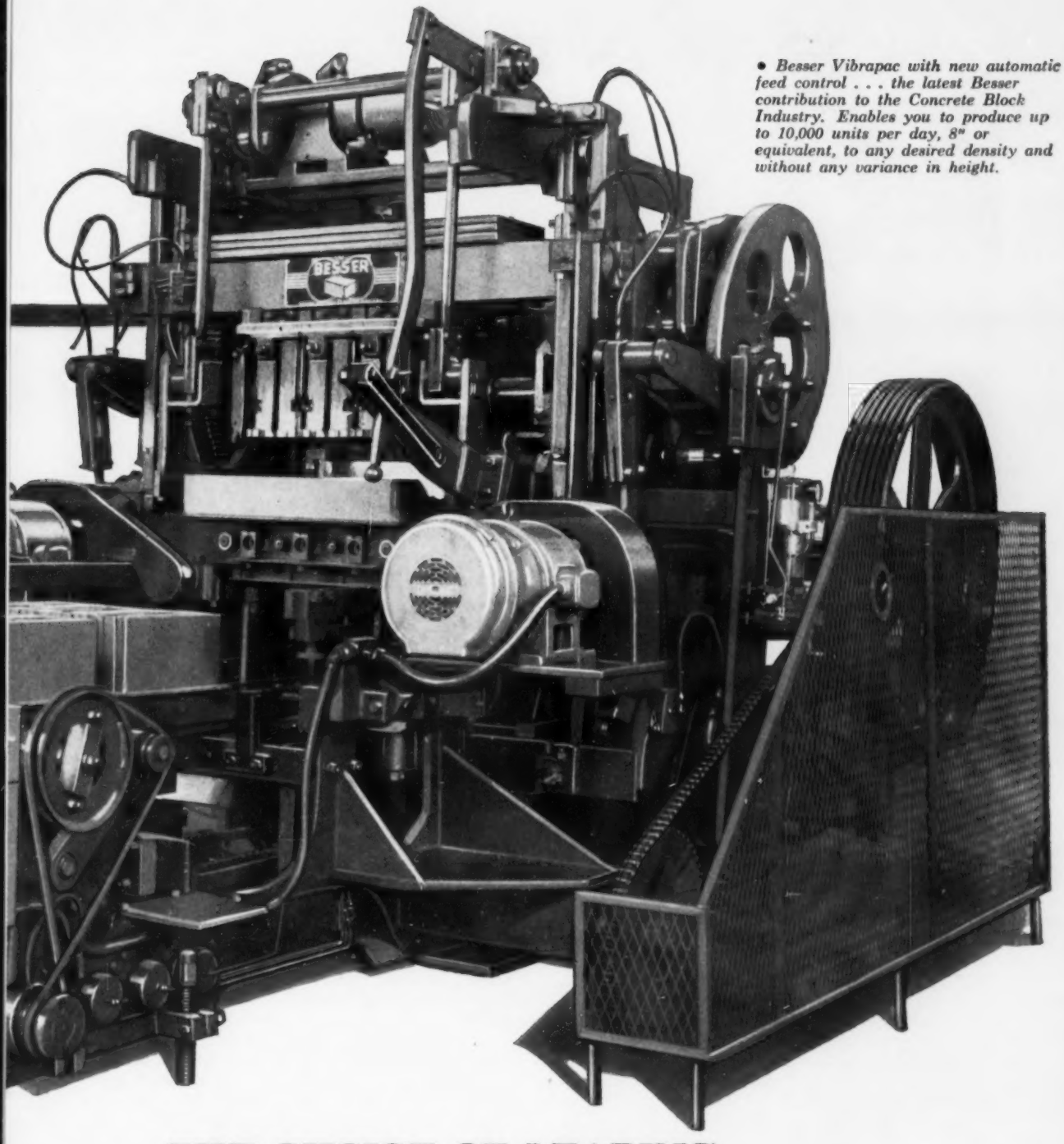
1st to sponsor a school for block makers and block users, with competent instructors and established curriculum.

1st to offer a Materials, Methods, Research & Testing Service to solve mixing and proportioning problems.

1st to produce a building block with U.P.T. — (Uni-Pressed Top) so block has no machine marks whatsoever.

1st to introduce Automatic Feed Control as a dependable and visible means of maintaining the quality of the block and to eliminate guess work in feeding.

1st to introduce Automatic Synchronized Block Handling for both the loading of green block on rack and the unloading of cured block off rack, thereby eliminating one man for Off-bearing and one man at Cubing Station.



• *Besser Vibrapac with new automatic feed control . . . the latest Besser contribution to the Concrete Block Industry. Enables you to produce up to 10,000 units per day, 8" or equivalent, to any desired density and without any variance in height.*

THE CHOICE OF LEADING BLOCK MAKERS — EVERYWHERE!

Today's Front Pallet Feed Vibrapac forms the heart of the modern concrete block plant. It produces premium block on a fast, continuous production basis, and, in a large measure, accounts for the phenominal growth of the Concrete Masonry Industry.

BESSER

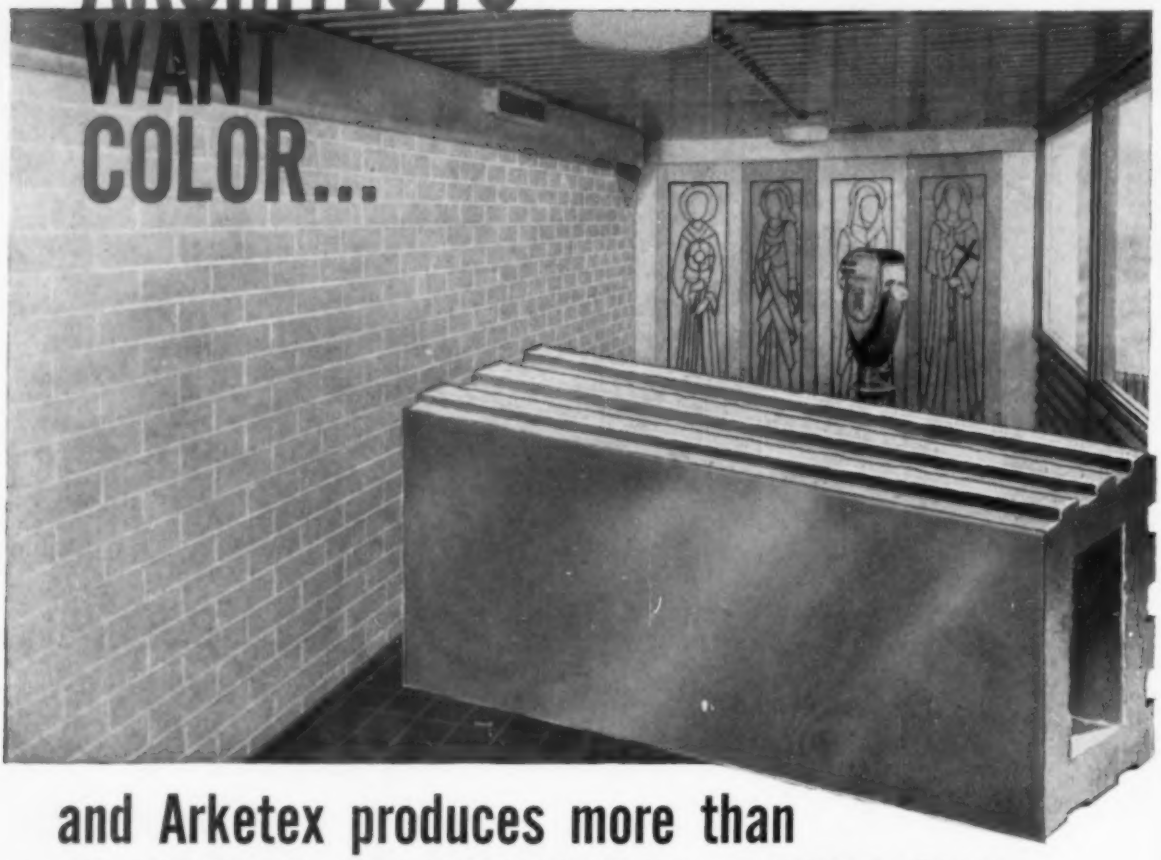
BESSER company

Alpena, Michigan, U.S.A.

First in Concrete Block Machines

ARKETEX CERAMIC GLAZED STRUCTURAL TILE in the observation tower of the Life and Casualty Insurance Company of Tennessee. Architect: Edwin A. Keeble Associates, Inc., Nashville, Tenn. General Contractor: J. A. Jones Construction Company, Charlotte, N. C. Masonry Contractor: Elliott and McIntosh, Nashville, Tenn.

ARCHITECTS WANT COLOR...



and Arketex produces more than 48 SHADES ON STRUCTURAL FACING TILE

Architects are specifying more and more ceramic glazed structural tile for economy reasons as well as for its aesthetic and psychologic values. Colorful, durable structural facing tile—like that made by Arketex Ceramic Corporation, Brazil, Indiana—creates completely finished load-bearing walls in a single construction operation. Arketex's full complement of shapes and sizes is produced in a rainbow of decorative and functional colors. The smooth, colorful glaze surface retains its beauty, reduces maintenance to infrequent washing.

Through the years Drakenfeld has been proud to meet Arketex's needs for many colors with glaze stains formulated to precisely repeatable specs. Whatever the scope of *your* present or future production plans in this expanding market, remember that Drakenfeld offers a variety of consistently uniform coloring materials—glaze stains, glaze specks, prepared glazes, sand colors, englobe stains—to suit practically every brick or tile processing setup. An experienced team of our ceramists will gladly discuss color application methods and give you prompt, reliable help on your coloring problems. We welcome your inquiry.

CALL ON **Drakenfeld** *YOUR PARTNER IN SOLVING COLOR PROBLEMS*

B. F. DRAKENFELD & CO., INC.

Executive Offices: **45 Park Place, New York 7, N. Y.**

Factory and Research Center: **Washington, Pa.**

Pacific Coast Agents:

BRAUN CHEMICAL COMPANY, 1363 So. Bonnie Beach Place, LOS ANGELES 54, California, Phone: ANgelus 9-9311

BRAUN-KNECHT-HEIMANN COMPANY, 1400 Sixteenth Street, SAN FRANCISCO 19, California, Phone: HEmlock 1-8800

RS-7

B&CR Sales Survey Reveals Interesting Facts on Brick Selling

Personality, product knowledge and enthusiasm motivated by desire are the main factors that contribute to a successful salesman. This is only one of several facts ascertained as a result of a questionaire mailed out recently to brick companies throughout the country.

The questionaire was divided into two categories, administration and compensation. Under administration some 16 questions were asked with some very enlightening statistical results emerging. In answer to the question "What are your sources for new salesmen 55% of the replies indicated referrals outside the company with the next closest being 40% which were referrals in the organization itself.

Following is the survey in its entirety.

I. ADMINISTRATION

1. What are your sources for new salesmen?

53 answered—4 didn't answer

2%	Magazine ads	Percent that mentioned source
15%	Newspaper ads	
36%	Employment Agencies	
40%	Referrals in the Company	
55%	Referrals Outside the Company	
8%	Competition	
9%	Situations Wanted Ads	
13%	Other **(Personal Contact & Colleges)**	

2. Which one of the following do you employ in your selection of salesmen process?

50 answered—7 didn't answer

44%	One personal interview only	Percent that mentioned source
4%	Group interviewing	
54%	Multi-stage or repeat interviews	
4%	Outside testing and/or consulting services	
8%	Intelligence tests	
12%	Personality tests	
10%	Aptitude tests	
—	Rating Systems	
60%	Check of References	

3. What traits do you feel are most desirable for success in selling?

45 answered—12 didn't answer

In order, according to the number of times they were mentioned, these six traits were the most frequently mentioned as being desirable for success in selling.

53%	Personality	Percent that mentioned
38%	Product knowledge	
38%	Enthusiasm, desire	
27%	Perseverance	
22%	Appearance, neatness	
20%	Integrity	

Intelligence, Confidence, Gregariousness, Industry,

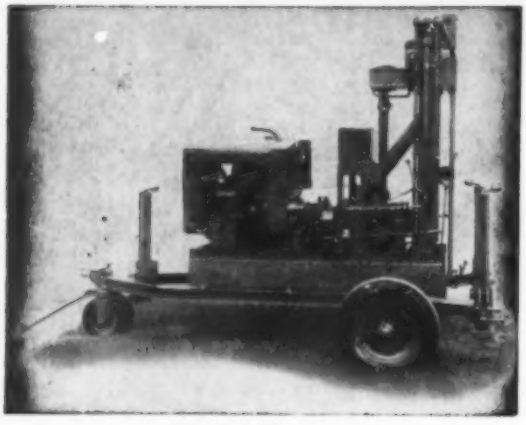
What traits do you feel are most desirable for success in selling?

How often do your salesmen submit call reports?

IN MINUTES . . . INSTEAD OF DAYS

Samples obtained from depths up to 100 feet with the all new

Parmanco



Model HV-172
Hydraulic Vertical Drill

- HEAVY DUTY
- FOUR SPEED AUGER
- FINGER TIP CONTROL
- 65 H. P. MOTOR
- ALL DRIVES MOUNTED ON TIMKEN ROLLER BEARINGS

RUGGED COMPACT EASY TO OPERATE

THREE LEVELING JACKS TO INSURE STRAIGHT HOLES. FIELD PROVED

Complete Information on Request

SPECIALISTS IN AUGER TYPE DRILLS

PARIS MANUFACTURING COMPANY

PARIS, ILLINOIS

Sincerity were mentioned on between 11%-15% of the responses.

4. Do you have a formal sales training program?

55 answered—2 didn't answer
18% do have a formal sales training program.
82% do not have a formal sales training program.

How long does it run?

The responses here do not allow a conclusive statement.

Where is it held?

33% conduct part of the program in the FIELD.
33% conduct part of the program in the BRANCH SALES OFFICE.
89% conduct part of the program in the MAIN OFFICE.

5. Do you have a sales training manual or handbook?

55 answered—2 didn't answer
9% do have a sales training manual or handbook.
91% do not have a sales training manual or handbook.

6. How often do your salesmen submit call reports?

56 answered—1 didn't answer
55% submit DAILY call reports.
27% submit WEEKLY call reports.
— submit TWICE A MONTH call reports.
2% submit MONTHLY call reports.
16% DO NOT SUBMIT call reports.
100%

7. What is the average amount of Net Sales Volume per call?

19 answered—38 didn't answer
— under $100
32% $100 - $149
16% $150 - $199 Median value—$207
20% $200 - $299
16% $300 - $700
16% Over $700
100%

There would seem to be some reason to suspect that this question was not fully understood. The data reported almost unanimously looks more like the average amount of a completed sale than the figure that would result from dividing total sales dollars by total calls made (including calls where no sale was made).

8. What is the average number of sales calls made per day by your salesmen?

53 answered—4 didn't answer
2% made 1-2 calls per day
21% made 3-4 calls per day
34% made 5-6 calls per day
40% made 7-8 calls per day
3% made over 10 calls per day
100%

9. What types of sales quotas do you use?

49 answered—8 didn't answer
31 (63% of those reporting) use quotas
18 (37% of those reporting) do not use quotas
Of those companies that use sales quotas:
32% use INDIVIDUAL quotas
7% use BRANCH OFFICE quotas

Continued on page 123

NOW! You can receive FREE information on:

1. Advertised Goods
2. New Products
Appearing in this issue...

Belt conveyor idlers by BARBER GREENE has now been expanded to include two new series of heavy-duty units with both being built to handle large lumps and heavy materials at high speed.

38/Circle on Reader's Service Coupon

Samples obtained from depths up to 100 ft. in minutes with Parmanco model HV-172 hydraulic vertical drill by PARIS MFG. CO. item has four speed auger, finger tip control, 65 h.p. motor. All drives are mounted on timken bearings.

39/Circle on Reader's Service Coupon

Mallix screen plates and grate bars are made from a specially heat-treated material. They are tough but not brittle and are said to stand up under severe service without cracking. A product of the NATIONAL MALLEABLE AND STEEL CASTINGS CO.

40/Circle on Reader's Service Coupon

HOW TO USE:

All you do is circle the number of the editorial item or the page number of the advertisement on this card, and mail it to us.

Silaneal treatment by DOW CORNING CORP. Is said to save more than it costs-in reducing yard staining—and in the lower selling costs and higher volume resulting from easy-to-lay, efforescence-free brick.

41/Circle on Reader's Service Coupon

Jointed clay pipe by AMERICAN VITRIFIED PRODUCTS CO. is reportedly longer, stronger and prevents filtration six ways. Features factory-made quality, no leakage, and quick foulproof installation.

42/Circle on Reader's Service Coupon

11-59

1 Ariel Davis
2 Harbison-Walker
3 Overstrom & Sons
4 Epic, Inc.
5 Gerlinger Carrier Co.
6 Pacific Transducer Corp.
7 General Electric
20 Ferro Corp.
21 Sanford Day
22 Chambers Bros. Co.
23 Chisholm, Boyd & White
24 Logan Clay Products
25 Drakenfeld, B. F.
26 Buffalo Forge Co.
27 Stoody Co.
28 Acme Steel Co.
29 Hannon & Sons, F. R.
30 Miller Equipment Co.
31 Eagle Iron Works
32 The North American Mfg. Co.
33 Williams Patent Crusher
34 Side-O-Matic
35 Ceramic Color & Chemical Mfg. Co.
36 Rockfacer Co.
37 Builders Equipment Co.
38 Barber Greene
39 Paris Mfg. Co.
40 National Malleable & Steel Castings Co.
41 Dow Corning Corp.
42 American Vitrified Products Co.
Page 3 Williams Patent
Page 4 Edward Orton
Page 6 7 Ameri. Truck
Page 8 Star Foundry
Page 9 Wellsville Fire
Page 10 Stephen Adamson
Page 11 Dow Corning
Page 12 Lead Industries Assn.
Page 13 North American Mfg.
Page 14 15 Builders Equipment
Page 16 Miller Equipment
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Page 19 Chambers Bros.
Page 20 Frank Hough
Page 21 TAM
Page 22 TAM
Page 23 TAM
Page 24 TAM
Page 25 Sanford Day
Page 26 Aluminium Ltd.
Page 27 Robinson Ventilating
Page 28 29 Babcock & Wilcox
Page 30 31 Bristol
Page 32 Clearfield
Page 35 Denver Fire Clay
Page 36 Coors Porcelain
Page 37 Signode Steel
Page 38 Chis. Boyd & White
Page 39 Chis. Boyd & White
Page 40 Kimberly Clark
Page 41 Kimberly Clark
Page 42 Acme Steel
Page 43 Kaiser Aluminum
Page 44 Ohio Kilns
Page 45 Mason Colors
Page 46 Stoody Co.
Page 52 Ferro Corp.
Page 53 Ferro Corp.
Page 56 Dwight B. Hendryx
Page 57 Barber Greene
Page 58 Bickerstaff
Page 78 Harrop Ceramics
Page 79 Harrop Ceramics
Page 93 North State
Page 91 Raybestos Manhattan
Page 95 Berkshire Chemical (Vitro)
Page 98 Swindell-Dressler
Page 57 Swindell-Dressler
Page 100 Metal & Thermit
Page 101 Universal Atlas
Page 102 Process Solvent
Page 102 Garden City
Page 103 Ferro Corp.
Page 104 Varner, R. G.
Page 105 Varner, R. G.
Page 106 Harbison Walker
Page 111 Refractory & Insulation
Page 112 International Clay of Dela.
Page 113 Deister Concentrator
Page 114 U. S. Borax
Page 115 Rockfacer
Page 115 National Malleable
Page 116 Besser Co.
Page 117 Besser Co.
Page 118 Drakenfeld, B. F.
Page 120 Paris Mfg.
Page 124 Side-O-Matic
Page 125 Side-O-Matic
Page 126 Link Belt
Page 127 Orefraction
Page 128 Crescent Belt
Page 128 Cement Gun
Page 129 Hauck Mfg.
Page 130 Gates Rubber
Page 131 Gates Rubber
Page 132 Tectronics
Page 132 Straight Engr.
Page 133 Chase Foundry
Page 134 Pangborn
Page 135 International Clay
Page 135 Universal Vibrating
Page 136 Bradney Machine
Page 136 Pekay Machine
Page 136 Pekay Machine
Page 137 Ceramic Color
Page 137 Hannon
Page 138 Des Moines Glove
Page 138 Tyler, W. S.
Page 139 Overstrom
Page 139 O. Hommel
Page 139 Robeson Process
Page 140 Eagle Iron
Page 140 Gravely Tractor
Page 141 Foote Mineral
Page 141 Walter Stoll
Page 143 Fernholtz

I'm also interested in those items shown in the Advertisements. Please have manufacturer send me literature and information.

Mfgrs Name .....

Mfgrs Name .....

NAME ..... TITLE .....

COMPANY .....

STREET .....

CITY ..... ZONE ..... STATE .....

This card void after January 30, 1960

Cut hot load sag, spalling loss . . . slagging with new dragon brand by the DENVER FIRE CLAY CO. High quality semi-silica brick made in standard series and special shapes are available.

43/Circle on Reader's Service Coupon

Car Tops by PACO are said to cut replacement costs by as much as 50%. Is highly resistant to spalling and a good hot load test.

44/Circle on Reader's Service Coupon

Manganese ores by NATIONAL PAINT & MANGANESE CO. are available. Expansion and modernization plus more outlets will enhance product's usefulness.

45/Circle on Reader's Service Coupon

The Octopus for complete automatic production of pipe with drying rings by PEARNE & LACY CO. Is said to remove large pipe from vertical press, finishes both spigot and socket ends, cuts pipe to length and provides drying rings.

46/Circle on Reader's Service Coupon

Equipment by The BONNOT CO. is said to give product quality, quantity production and the lowest possible cost.

47/Circle on Reader's Service Coupon

Modern and efficient screening at a low price is available from the UNIVERSAL VIBRATING SCREEN CO.

48/Circle on Reader's Service Coupon

Brick and clay machinery by FERNHOLTZ MACHINERY CO. includes auger machines, mixers, pans and hydraulic cutters.

49/Circle on Reader's Service Coupon

Extra strength pipe by PACIFIC CLAY PRODUCTS CO. Available at no extra cost. Developed in companies' research labs.

50/Circle on Reader's Service Coupon

Gray brick beauties made with ebony manganese, a product of the FOOTE MINERAL CO.

51/Circle on Reader's Service Coupon

Additive-A reduces seconds, insures uniformity, improves clay workability, aids water penetration, permits more even temper. Is a product of KIMBERLY-CLARK.

52/Circle on Reader's Service Coupon

Batch Mixers by the makers of the world famous Vibrapac. The BESSER CO. product insures quick acting air operated discharge gate with strong cylinder action.

53/Circle on Reader's Service Coupon

Dry Pressing by LASSMAN features precise control and smooth response over a wide range of operating characteristics.

54/Circle on Reader's Service Coupon

Brickhandling costs are cut with a BICKERSTAFF brick fork. Is said to reduce kiln loading and unloading time by 60-man hours.

55/Circle on Reader's Service Coupon

Vibrating screens by OVERSTROM & SONS, INC. are built to thrive on high capacity requirements.

56/Circle on Reader's Service Coupon

FIRST CLASS
Permit No. 183
Chicago, Ill.

BUSINESS REPLY MAIL
No Postage Stamp Necessary If Mailed in the United States

POSTAGE WILL BE PAID BY

BRICK & CLAY RECORD

5 South Wabash Avenue

Chicago 3, Illinois

Continued from page 120

61% use COMPANY quotas
100%

10. How are the quotas expressed?
30 answered—1 didn't answer
23% express quotas in terms of TOTAL DOLLAR SALES VOLUME
17% express quotas in terms of DOLLAR SALES VOLUME, BY PRODUCTS GROUPS
50% express quotas in terms of UNITS OF PRODUCTS
3% express quotas in terms of TOTAL DOLLAR SALES VOLUME **and** DOLLAR SALES VOLUME, BY PRODUCT GROUPS
7% express quotas in terms of TOTAL DOLLAR SALES **and** UNITS OF PRODUCTS
100%

11. In relation to the salesmen, how are the quotas used?
27 answered—4 didn't answer
52% use quotas in their COMPENSATION SYSTEM
15% use quotas in their RATINGS of salesmen
30% use quotas as a BASIS OF INCREASES IN COMPENSATION
3% do not use the quotas for any of the above
100%

12. What factors are considered in determining your quotas?
29 answered—2 didn't answer

31%	Salesman's Opinions (Grass Roots)	Percent who mentioned
55%	Last Year's Performance	
38%	Share of Market Estimate	
24%	General Business Indicators	
—	Outside Consultants	
10%	Jury of Executive Opinion	

13. Are quotas review during the year?
25 answered—6 didn't answer
21 (84% of those who answered) DO review quotas during the year.
4 (16% of those who answered) DO NOT review quotas during the year.

How often?
46% review MONTHLY
27% review QUARTERLY
27% review SEMI-ANNUALLY
100%

14. Who has the final responsibility for quota determination?
25 answered—6 didn't answer
36% Sales Manager
32% President/Partner/Owner
16% Vice President
12% General Manager
4% Treasurer
100%

15. How do you handle salesmen's expenses?
55 answered—2 didn't answer
94% use EXPENSE ACCOUNTS
4% use FLAT ALLOWANCE

MECO
SINCE 1910

STREAMLINE YOUR HANDLING OPERATIONS . . .

WITH ELECTRONICALLY OPERATED EQUIPMENT...

Saves Time & Labor . . . Pays For Itself!

MECO BATTERY POWERED TRANSFER CARS

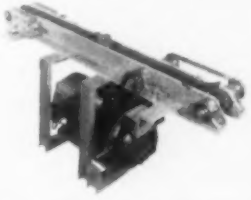
WITH PUSH BUTTON CONTROLS

Designed and built for heavy duty use. Simple and safe to operate. Two forward speeds and reverse. Positive foot and hand brakes, or electric brakes. Ready for immediate action – no trolley or other special electrical connections needed. Selenium rectifier for battery charging. A complete series of models available. Reduce handling costs, increase production, with MECO Transfer Cars.

MECO ELECTRONICALLY OPERATED TURNTABLES

Rotate heavily loaded cars, racks, or fabrications, to nine positions for smooth, fast, easy loading or processing – at the touch of a finger! These turntables reduce personnel fatigue, step up production. Ruggedly built to give a lifetime of service.

MECO CAR PUSHERS



Speed loading of autoclaves. Eliminates breakage of wares due to bumping of cars or other rough handling. Built for heavy duty use, car pusher is capable of pushing 17 loaded cars into position. Portable unit, ready for use where needed. Mounts under track. Requires a minimum of maintenance.

FOR ADDITIONAL INFORMATION, WRITE, WIRE, OR CALL COLLECT. EVERY INQUIRY RECEIVES PROMPT ATTENTION.

THE MANUFACTURERS EQUIPMENT COMPANY
218 MADEIRA AVE. • DAYTON 4, OHIO • Phone BA 2-5565

2% use FLAT ALLOWANCE and EXPENSE ACCOUNTS

100%

If flat allowance, what is the per diem allowance?

Too few answers to report.

If expense accounts, who approves?

49 answered—3 didn't answer

22% President/Partner/Owner
22% Sales Manager
12% Treasurer
12% Vice President
12% General Manager
10% Manager
10% Others

100%

16. What is the average annual expense (exclusive of compensation) per salesman?

48 answers—9 didn't answer

Expenses per salesman were reported within a range from $200 to $6000, annually. Obviously, there are both local and traveling salesmen involved.

6% under $500
8% $500—$999
12% $1000—$1499
4% $1500—$1999
15% $2000—$2499
12% $2500—$2999
12% $3000—$3999
12% $4000—$4999
19% $5000 and over

100%

II. COMPENSATION

1. By what method do you compensate your permanent full-time salesmen?

55 answered—2 didn't answer

25% Salary only
16% Salary & Commission
36% Salary & Bonus
9% Salary & Commission & Bonus
— Commission & Bonus
— Straight Commission
6% Salary only **and** Salary & Bonus
2% Salary only **and** Salary & Commission
2% Salary & Commission **and** Salary & Bonus
2% Salary & Commission, Salary & Bonus, Salary & Commission & Bonus, **and** Commission & Bonus

100%

2. Have you had another type of compensation plan within the last 5 years?

54 answered—3 didn't answer

7 (13% of those who answered) said YES
47 (87% of those who answered) said NO

Of the 7 who had had another type of compensation plan within the last 5 years, 5 changed to a plan with more incentive wage while 2 changed to a plan with more guaranteed wage.

3. Why do you prefer the compensation system you have?

36 answered—21 didn't answer

Most of the reasons expressed were the type that one would find listed as the advantages of a type of com-

SIDE-O-MATIC

Requires No Pallets or Strapping for Efficient Brick Handling

• Save Money
• Save Man Hours

pensation system in any sales management textbook. There was some disagreement as to whether the salesmen should see his compensation rise and fall on his production or not. Some think this excellent motivation; others feel the salesman will get discouraged, or he won't get good accounts, i.e., he'll take any kind of business, or he cannot do any missionary work or service calls.

Several of the systems were supported on the strength of their being simple to operate. There was some indication that some of the companies really hadn't thought about changing or challenging their present system.

Some companies liked to have the subjective element of a bonus arrangement in their control.

More than a few companies flatly stated that there had to be some incentive wage (generally commission) to weed out the men from the boys, and to properly recognize superior performance.

Several of the Salary only companies felt that the business was too up-and-down to use any other type.

4. What is the average annual income of your salesmen?

48 answered—9 didn't answer
Arithmetic Average—$7,610
Median Average—$7,500

- **4%** under $5000
- **10%** $5000—$5999
- **23%** $6000—$6999
- **21%** $7000—$7999
- **18%** $8000—$8999
- **6%** $9000—$9999
- **16%** $10,000 and over
- **100%**

5. What is the average sales volume produced per salesman?

32 answered—25 didn't answer
Median average—$250,000

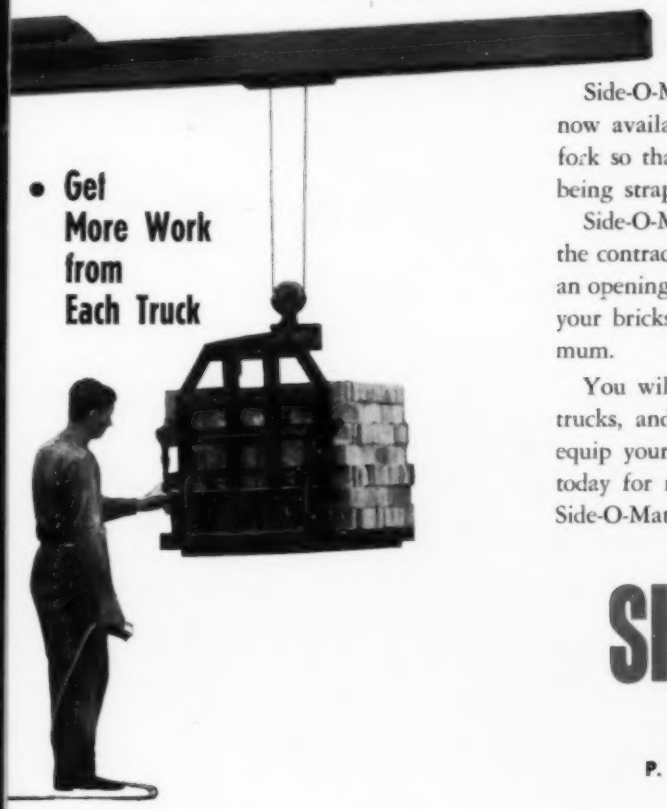
- **13%** under $150,000
- **22%** $150,000—$199,999
- **13%** $200,000—$249,999
- **9%** $250,000—$299,999
- **9%** $300,000—$399,999
- **13%** $400,000—$499,999
- **3%** $500,000—$599,999
- **3%** $600,000—$699,999
- **3%** $700,000—$799,999
- **3%** $800,000—$899,999
- **3%** $900,000—$999,999
- **6%** Over 1,000,000
- **100%**

III. DESCRIPTION OF SALES FORCE

1. How many salesmen do you have?

56 answered—1 didn't answer

- **20%** had ONE salesman
- **25%** had TWO salesmen
- **18%** had THREE salesmen
- **16%** had FOUR salesmen
- **9%** had FIVE salesmen
- **12%** had SIX or MORE salesmen
- **100%**



The 'Cadillac' of Unloaders

Side-O-Matic, the original boom-type unloader, is now available with the Bickerstaff squeeze-type brick fork so that now you can unload brick cubes without being strapped or palletized on the job mechanically.

Side-O-Matic Unloaders will put the bricks where the contractor wants them—in the excavation, through an opening, or around the job. Side-O-Matic will unload your bricks gently, cutting breakage losses to a minimum.

You will speed deliveries, get more use from your trucks, and have more satisfied customers when you equip your fleet with Side-O-Matic Unloaders. Write today for more details and the name of your nearest Side-O-Matic dealer.

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UNLOADER CORP.

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TELEPHONE 7357

How to keep a

clean screen

when sizing sticky materials

LINK-BELT ALONE heats screens with a "series" arrangement requiring fewer cables, lower initial cost . . . providing less power loss, more even heating. Above, each of five "UP" screen cloths is connected to 12-kva transformer.

Electrically-heated cloth enables LINK-BELT "UP" vibrating screen to deliver its full capacity

HERE'S a screen delivering high-velocity action that's unsurpassed for fast, accurate sizing. And to guard that efficiency against blinding by sticky or hygroscopic fines, Link-Belt offers a superior electric screen-heating arrangement. Among its advantages:

GREATER OUTPUT. Open mesh may boost capacity as much as 50%. Downtime for cloth cleaning and replacement is eliminated.

BETTER, MORE UNIFORM PRODUCT. Clear cloth provides more accurate sizing.

LONGER CLOTH LIFE. No whipping due to material accumulation.

LABOR SAVINGS. Ends mechanical cleaning.

Write your Link-Belt office for Book 2777 containing full data on "UP" screens.

LINK-BELT

VIBRATING SCREENS

LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants and Sales Offices in All Principal Cities. Export Office, New York 7; Canada, Scarboro (Toronto 13); Australia, Marrickville (Sydney), N.S.W.; South Africa, Springs. Representatives Throughout the World. 14.525

2. Enter the number of your salesmen in each of the following age brackets.

55 answered—2 didn't answer

Assuming a mid-pt. in the over 50 group half-way between 50 and 65, the Arithmetic Average age of the salesmen is 39.4 years.

—	Under 21
4%	21—25
13%	25—30
43%	30—40
25%	40—50
15%	Over 50
100%	

3. How many of your salesmen have completed: Elementary, 2 yr. High School, 4 yrs. High School, 1-2 yrs. College, 3-4 yrs. College, Over 4 yrs. College?

Percent Having Completed

100%	Elementary
98%	2 years High School
96%	4 years High School
61%	1-2 years College
37%	3-4 years College
9%	Over 4 years College

The same data may be presented another way by asking: What is the highest level of formal education your salesmen have attained?

2%	Elementary
2%	2 years High School
35%	4 years High School
24%	1-2 years College
28%	3-4 years College
9%	Over 4 years College
100%	

4. How many of your salesmen have been with the company: Less than 1 year, 1-3 years, 3-5 yrs., 5-10 yrs., 10-20 yrs., over 20 yrs?

56 answered—1 didn't answer

8%	Less than 1 year
23%	1-3 years
18%	3-5 years
24%	5-10 years
18%	10-20 years
9%	Over 20 years
100%	

5. What were the members of your present sales force engaged in before joining you?

56 answered—1 didn't answer

9%	School
8%	Armed Forces
46%	Sales with Another Firm
15%	Non-Sales with Another Firm
22%	Non-Sales within your Company
100%	

The editors of Brick & Clay Record made a telephone check of other building material manufacturers to determine their compensations to salesmen. One large manufacturer reported that his salesmen receive an average of $5500 in salary, $500 in bonuses, $500 for expenses and the use of a company car. Another reported his base pay for salesmen at $7500, with bonuses, expense allowances and car allowances for a total near $9,000. Factors affecting compensations ranged from level of education to age and experience. Duration of employment has an effect on the final salary.

Product Design Highlights Davidson's Change

Improvement in product design and long-range plant modernization program have combined to make the Davidson Brick Co. one of the large producers of brick in the Los Angeles area.

The major product change was adoption of a modular-sized brick which is three inches thick with 3⅜ x 11⅜ inch face. Jointed with ⅝ inch of mortar, this provides 4 x 12 inch units which save time and money in designing, drafting and laying. Davidson is the only manufacturer in its area producing this attractive modular brick as a standard run.

Plant modernization, says Saul Cogen, company president, was designed not only to handle modular brick efficiently but to achieve continuous, economical year-round production.

The company has come a long way since the late Nathan Davidson started his plant in 1919. Then, the only product was a sand molded, field-dried common brick. Modular brick wasn't the first change for the company. About 15 years ago they brought out a 3½ x 3¼ x 10 inch brick for the Metropolitan Life Insurance Company's Park LaBrea project. Over twenty million brick went to that program. Today, Davidson manufactures eleven types of brick for a total annual production of fifty million brick.

Progress in modernizing the plant is one important reason for the growing sales volume. Davidson Brick operates twelve month a year irrespective of heat, rain or even rapid humidity changes contrary to usual Southern California practice. This was made possible with construction of modern driers along with a specially designed kiln firing system. This not only puts Davidson in a better position to meet customer needs but permits more efficient utilization of equipment and manpower. Traditional winter lay-offs were eliminated and employees work an eight hour day with no need for seasonal overtime which gives the company a decided economic edge.

Every element of operating method and equipment has been chosen to insure this smooth, continuous, all-weather production. Clay is ripped from the nearby quarry by a Catipillar D-7.

Continued on page 128

Orefraction®
ZIRCON
(Granular and Milled)

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In the Ceramic Industry, this familiar trademark has become a Hallmark of Zircon.

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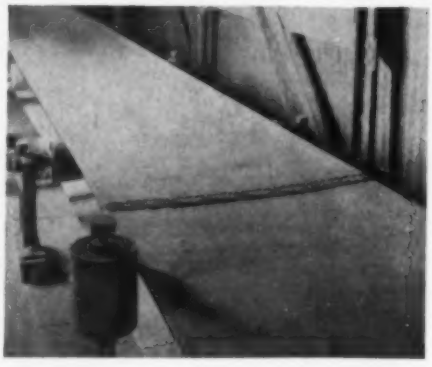
P. O. BOX 247 ANDREWS, S. C.

TOPS . . . functioning like new after 18 MONTHS AT 300 TONS PER HOUR!



Service as outstanding as this is the rule instead of the exception when CRESCENT Belt Fasteners are used. Furthermore, the faithful acceptance of CRESCENT Belt Fasteners over the years demonstrates conclusively that our original design for joining and repairing belting of any length, width and thickness is still tops in performance.

Solving tough problems in joining virtually any kind of belting has become an everyday occurrence with us. In brief, CRESCENT Belt Fasteners provide the fastest, most durable and most economical method of joining and repairing conveyor, elevator and transmission belting. Also, CRESCENT Rivets are self-piercing and self-clinching, thus no holes to align and bore. A hammer is the only tool required to execute any job.

A trial installation will verify the acknowledged fact that CRESCENT Belt Fasteners make belting give better service. Remember . . . our vast experience accumulated since 1897 is at your disposal without obligation. Get complete information today!

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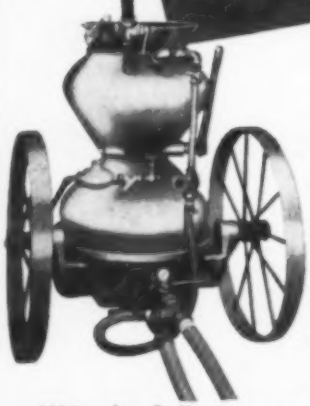
Save! ON FURNACE REPAIR and REFRACTORY INSTALLATION

THE "CEMENT GUN"® METHOD



The CEMENT GUN is simple to operate; two or three of your own men can learn quickly and easily, after which they can make all your refractories repairs. With the CEMENT GUN they can place a lining 1" to 6" thick in one continuous operation. They can make patches in a "hot" furnace. They can place up to 5 thousand pounds of refractory material an hour. The CEMENT GUN method saves down time, saves material and extends the life of your present linings. Write today for further information.

Write for Bulletin No. 3000-B Today!

CEMENT GUN COMPANY
Gunite® Contractors
1520 Walnut Street • Allentown, Pennsylvania

Continued from page 127

Then one of the two Tournapulls 17 yard selfloading pans scrapes the clay up and moves it to a 45 yard sunken hopper. Mining is done in such a manner that there is never a pit created by the equipment but rather a mountainous clay pile. This permits clay gathering during the rainy season.

From the hopper, clay is moved on an apron conveyor to a scalping screen with ⅜ inch mesh. Passing material goes direct to the pugger. Over size material goes through a primary crusher and then through a secondary crusher. Discharge from this mill goes to a vibrated ⅜ inch mesh screen with fines moving to the pugger, the over size being recirculated through the secondary crusher.

All conveyors in the grinding section with the exception of the conveyor to the pugger are driven from the motors connected to the crushers. The mills are each powered with 20 H.P. Fairbanks-Morse motors. Each of the vibrating screens have a five H.P. motors and the apron conveyor at the receiving hopper is powered with 15 H.P.

The new mill room at Davidson uses a J. C. Steele double pug-combination brick machine. The first pugger receiving ⅜ and under clay directly from the screens. Power on the first pug is 100 H.P. The second pugger is operated under a vacuum of 28-29" and uses two 5 H.P. vacuum pumps to maintain this reduction of pressure. It too uses a 100 H.P. F-M motor on a separate drive for power. The extruder section of the machine uses 150 H.P.

The cutter, a Steele #18 is powered separately from the brick machine. Setting is directly to double deck dryer cars. After drying four days cars are moved to kiln area on rails, where cubes are built up and then set into the kiln with fork trucks.

Mud is used to seal the outside of the kilns and gas lines are laid out with burners set for the arches. Gas pressure is boosted with 2-40 H.P. blowers in order that the heat can be

Continued on page 129

Continued from page 128

carried across the kilns which are 54 feet wide. Firing proceeds with settle being used to indicate the completion of the burn. Cooling requires about seven days, as long as it requires to burn the kiln off.

Seventeen yard self loading pan dumps clay into 45 ton receiving hopper where apron feeder is used to move clay into processes.

When completed the gas lines and other equipment used in firing the kiln is moved to new kilns and the burned kiln is torn down only as sales require.

Cogen emphasizes that continuous production under the difficult operating conditions of a brick plant can be achieved only with dependable, heavy duty equipment. Dependability has been the major factor in the choice of all production equipment at the plant.

Changes of Address

If you're due to change your address, be sure to avoid missing an issue of B&CR. Please notify us of your new address at least six weeks in advance of moving date. Write: BRICK & CLAY RECORD, 5 South Wabash Ave., Chicago 3, Ill. Be sure to give both old and new address, zone number, and your name.

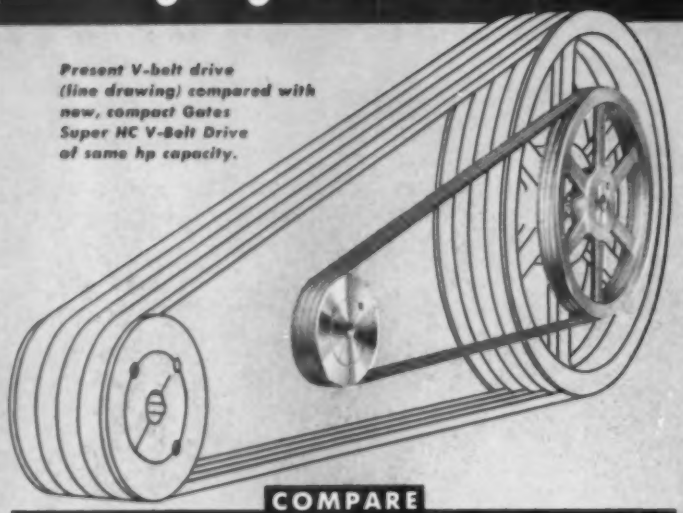
Ham Named Field Rep

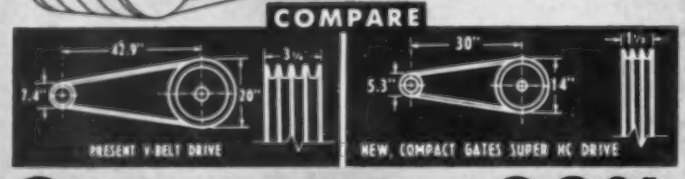
Bill M. Ham has been named field representative for the Carter-Waters Corp., handling the sale of Haydite aggregate in Missouri, Kansas, Iowa, Nebraska, Minnesota, Wisconsin and part of Illinois.

Glen-Gery Shale Brick Co., Reading, Pa., will spend approximately $700,000 to modernize its Watsontown plant this year by constructing seven new kilns, adding 25,000 sq. ft. of warehousing area, installing a crusher and expanding production capacity to 650,000 brick units a week.

Ernest L. Sprague has retired as superintendent of the McArthur Brick Co., McArthur, Ohio, after 50 years with the firm. He was superintendent for 42 years. Arthur E. Sharp, who started with the company in 1917, has also retired. He was factory clay mining superintendent.

Designing NEW DRIVES?





Save up to 20%

with new high capacity V-belt drive

When you change the whole drive — both V-belts and sheaves — remember: The cost of a Gates Super HC V-Belt Drive is as much as 20% less than the cost of present V-belt drives of the same horsepower capacity.

A development of Specialized Research in the world's largest V-belt laboratories at Gates, the new Super HC V-Belt makes possible the most compact, lightest-weight, lowest-cost multiple V-belt drive you can put on any machine!

Cuts drive space as much as 50%

With Gates new Super HC V-Belt, sheave diameters and widths can be reduced 30% to 50%, center distances 20% and more. Bearing load is lightened and total space occupied by the drive may be cut as much as 50%.

"The Modern Way to Design Multiple V-Belt Drives" is an informative handbook on the Super HC Drive, available from your nearby Gates Distributor listed in the Yellow Pages of your phone book.

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Gates SUPER HC V-BELT Drives

Car Top Refractories Need Design

Proper utilization of refractories can lower the net cost of tunnel car top block. With dozens of designs and many sets of conditions under which car tops are required to operate, selection of car top refractories has been for the most part a case of cut and try until the replacement rate dropped to a point where the operator felt he could live with the expense.

Unfortunately in many cases the initial experience was so strenuous that subsequent improvement was, relatively speaking, radical and this caused the cut and try procedure to be stopped short of the ultimate design. Other plants have by design or chance found better combinations of refractory and placement and have car maintenance expenses that amount to only a fraction of less fortunate producers' costs.

Several factors must be considered when selecting refractories for this type of service. Car top expenses include labor to maintain the top, materials used and rightfully the cost of cull material resulting from poor top conditions. With poor control, maintenance labor is apt to become a full time job for a man and if he can convince the superintendent he needs a helper he will do so. He then will fight to protect his "conditions" and thus becomes a stumbling block in the road of progress.

When accounting for material cost the cost of refractories, mortars and saw blades must be increased to reflect plant handling, storage and overhead expenses.

Often the labor and material cost of car top maintenance runs into thousands of dollars a year and is still of secondary importance to the cull rate. If a car top condition exists in which the entire lower course of the car setting consists of cull brick on a 16 course setting this will represent five or perhaps 6% of brick on the car. On a kiln firing 60,000 brick a day 5% is 3,000 brick

Continued on page 133

Obituaries

George A. Bass

George A. Bass, 95, former president and chairman of the board of the Hydraulic Press Brick Company, St. Louis, Mo., died of infirmities at his home recently.

Bass joined the firm in 1895 as a member of the Washington, D. C., branch office sales force.

He was made manager of the branch in 1899 and in 1904 was elected vice-president, moved to Philadelphia and placed in charge of the eastern operations of the company.

In June of 1909 he was elected president and moved to St. Louis. He continued as president until 1948, when he assumed the post of chairman of the board. He retired in 1950.

During his career, Bass served as president of the American Face Brick Association and participated in the drafting of the code for his industry for the National Recovery Administration. He was also active in the formation of the Structural Clay Products Institute.

He is survived by his widow, the former Miss Zitella E. Elbert; one daughter, Mrs. Robert C. Saunders; one son, George E. Bass of Philadelphia, and six grandchildren.

Earl Hermes

Funeral services were held on Tues. October 13 for Earl Hermes, President and General Manager of the Sapulpa Brick & Tile Co. of Sapulpa, Oklahoma. Death was attributed to cancer.

Sixty six years old at the time of his death he had spent over half a century in the brick business. Born in Wichita, Kans. his first job was for his father at a hand-made brick plant in Weatherford, Oklahoma Territory. After working at a number of southwestern plants, as well as in Canada and Ohio, he moved from production at the old Kusa plant of the Nicholson group in Henryetta, Okla. to sales in partnership with his father at the Sapulpa plant, in 1929.

In addition to being the President of the brick company he was a director of the American National Bank. A navy veteran of World War I he was active in Masonic activities and was one of the founders of the Tulsa Home Builders Association.

Need REPLACEMENT V-BELTS?

Improved Gates Vulco Rope gives you 2 important advantages

1. 40% higher hp rating at no increase in price: This important cost-saving advance is the result of Specialized Research in the world's largest belt-testing laboratories at Gates. **As replacements on standard drives these V-belts with 40% more load-carrying ability give longer service life...reduce down-time, cut belt replacement costs.**

2. Concave Sides (U. S. Pat. 1813698): The sides of Gates Belts are concave (Fig. 1). When the belt is bent around the sheave, the concave sides fill out—become straight—for full, uniform contact with the sides of the sheave groove (Fig. 2). Uniform contact insures maximum pulling power...even distribution of wear...longer life.

Available in all sizes from your nearby Gates V-Belt Distributor listed in the Yellow Pages of your phone book.

When designing new drives
use Gates new Super HC V-Belts and Sheaves.
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The Lugs that Stand the Tugs

Band your kiln walls with kiln crown into a compact permanent unit with the **kiln band fastener** that is **stronger than the band itself.**

Tecktonius "Bull Dog Grip" Fasteners eliminate slippage. Tension is spread equally over the kiln walls, making a compact unit of kiln walls and crown, thus performing the most important structural operation on your kiln.

ECONOMICAL—LONG LASTING—EASY TO APPLY—NO RIVETS TO SHEAR—NO WEAKENING OF BANDS

Immediate Delivery . . .

E. C. TECKTONIUS MFG. CO.

RACINE 1, WISCONSIN

SUPER CONFIDENCE

Developed by DOING ONE THING Many Years . .

Clockwise rotation shown. These are three of the more than 500 designs custom built to fit different machines, clays, capacities, speeds, desired plasticities and other variables existing in over 900 installations.

STRAIGHT ENGINEERING COMPANY

ADEL, IOWA, U.S.A.

Continued from page 130

and if these were not spoiled, but could be sold, they would bring over $100.00 a day additional revenue without increasing expenses in any way.

The same conditions that cause ware breakage also contribute to high refractory consumption. The normal loading of a kiln car does not impose high loads on the top, but if the top is allowed to become uneven and bumpy the stresses are concentrated and bending is experienced on both the top and the ware. The immediate result is ware breakage and further deterioration of the top.

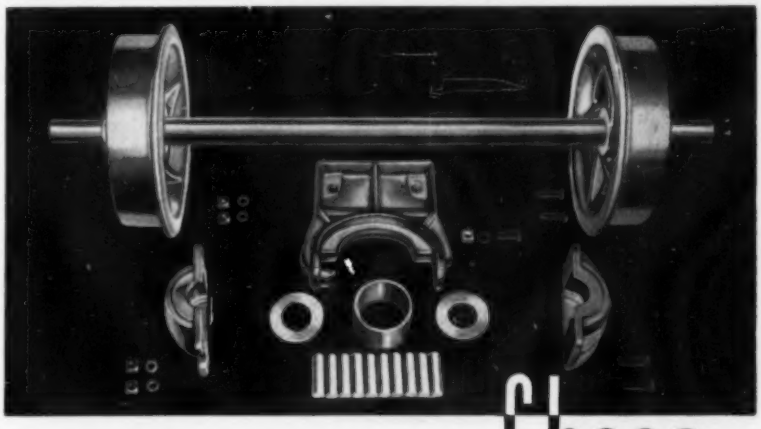
If brick are set with sand the joints in the top become loaded and each thermal cycle pushes the individual block a little further apart and soon buckling occurs and the car must be rebuilt.

Protection of joints to prevent infiltration of sand or chips goes far in eliminating this problem. Some plants use a high powered vacuum cleaner to clean each car after setting and before it is introduced into the dryer. This is recommended as it goes to the root of the problem.

Successful design of kiln settings must take into consideration the firing shrinkage of the ware. Since the load moves a great amount and the top not at all, provision must be made for the adjoining materials to slide or tilt. Since friction is high the sliding approach is less promising. The tilting of the lower courses will be least objectionable if the shrinkage of the load is distributed evenly. This necessitates a plan with minimum ties which is opposed to the interest of hack stability. A compromise must be made at this point with attention also given to the problems of mechanical handling from the kiln car if this is done.

Much damage to top refractories results from internal strains set up by the thermal expansion characteristics of the material from which it was made. Generally speaking top block with important amounts of low expansion materials such as pyrophyllite, petalite or talc exhibit more resistance to this kind of damage than other types. Strictly speaking, spalling damage is also dependent on strength of the refractory at any particular temperature and rate of temperature rise. Therefore bodies with sillimanite, andalusite or kyanite additions can reduce damage caused by internal stresses. Wollastonite appears to offer similar properties although actual applications are unnoted.

When tunnel kiln car maintenance is charged to direct cost with full accounting its true magnitude will become apparent and management can make good decisions regarding this phase of production. Selection of top block will depend on operating conditions and costs of plant labor and ruined brick.



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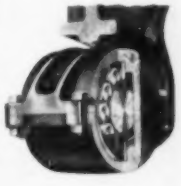
WHEELS, AXLES and BEARINGS

Keep your kiln cars, dryer cars and transfer cars in full-time operation. Check now for needed replacements and place your order for Chase running gear. Chase wheels, axles and bearings can be adapted to nearly all makes of cars and any track gauge. In addition to our own bearings, we can furnish any other type of bearing or bearing part to your specifications. Every Chase replacement part is backed by more than sixty years of experience in the manufacture of equipment for brick makers.
Write, wire or phone HI 4-1189 collect for complete details and a prompt estimate.

Chase Patented Flexible Bearing

Dust-proof and oil-retaining, this well-known and proven bearing has kept equipment rolling smoothly through more than 80% of the brick plants in the United States. Make sure your kiln cars, dryer cars and transfer cars are properly equipped for years of trouble-free service. Specify Chase patented bearings.



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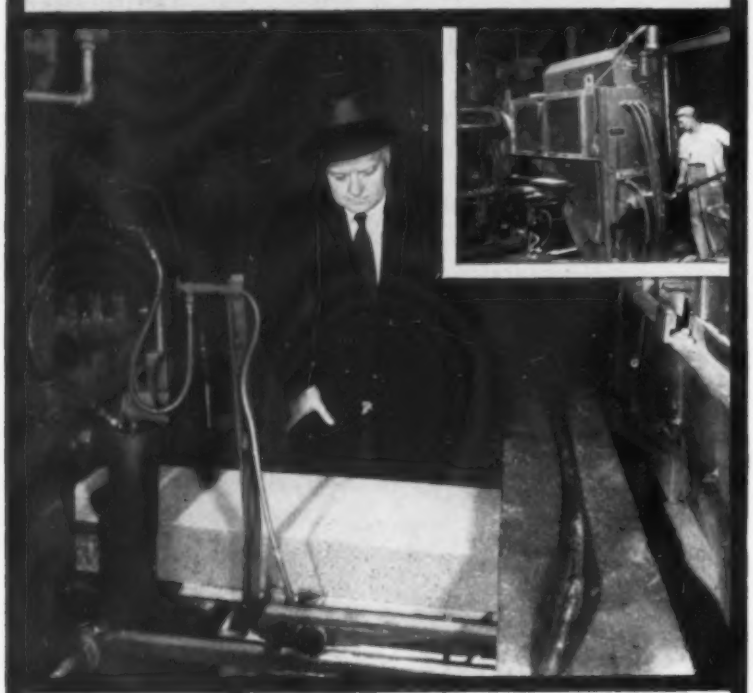

Pangborn Brick Sanding Machine produces colored brick at low cost

In line with the growing demand for sand-coated brick, progressive brick producers are installing Pangborn Brick Sanding Machines. Designed to fit over the pug mill-to-cutter conveyor, this special cabinet uses air blast nozzles to coat the top and sides of the "green" column with colored sand.

It operates quickly—producing 12,000 to 13,000 sand-coated bricks per hour—and permits versatility of use. For example, it utilizes eight nozzles for Norman brick, adjusts quickly to six nozzles for efficient coating of standard brick. Also it handles screened particles for special effects. Brick manufacturers express complete satisfaction with this special Pangborn Cabinet . . . and the increased saleability it has given brick products.

Ask the Pangborn man in your area for details on Pangborn Brick Sanding Machines or write PANGBORN CORPORATION, 790 Pangborn Blvd., Hagerstown, Md. *Manufacturers of Blast Cleaning and Dust Control Equipment —Rotoblast Steel Shot and Grit.*

Pangborn **BLAST CLEANING EQUIPMENT**

Letters to Editor

As a distributor in the industry I'd like to air some thoughts that might serve to benefit this industry.

A reliable distributor is a hard working, aggressive organization of individuals who have built, thru the years, a reputation for honesty and fair dealing which merits the confidence of Architect, Contractor, Owner and Manufacturer alike.

This reputation is a most valuable asset to the distributor as well as the manufacturer and should be jealously guarded by both.

The failure of the manufacturers' product, furnished by the distributor naturally jeopardize this reputation and it becomes the obligation of both parties to rectify the failure—see it thru to a successful conclusion.

The failure of a product is widely discussed in the industry and it soon becomes common knowledge among Architects, Contractors and others. This is a two way street! Rectification is also widely discussed. Why then will a manufacturer refuse to cooperate?

We have recently had four badly vanadium stained jobs on which the manufacturer disclaimed all responsibility. We are nevertheless standing behind this manufacturers product at a considerable cost which is a total loss to us.

I would like to ask two questions:

First: Why are brick supplied, in this day and age, which will green scum? The Brick and Clay Record has published several methods by which this can be stopped at the factory. Just last month (October) in the Addatives Section, the chemicals which are used to prevent the vanadium scum are described together with instruction how they are used. We would willingly pay more for a brick that will test. (No scum).

Second: Of what value is research or disemination of knowledge, if the findings are not used?

It is our considered opinion that a manufacturer should not be allowed to merchandise a product, which he cannot fully endorse. Allowing a policy of "Let the Buyer Beware" destroys the combined efforts of Structural Clay and serves as a black eye to the industry.

Yours very truly,
HOISS-KUHN-CHUMAN CO.
A. D. Hoiss

INTERNATIONAL CLAY MACHINERY CO.
INDUSTRIAL CARS
NOW a division of ERIE ENGINE & MFG. CO.

To reach more buyers—faster—for less cost, the Industrial Car Division of the INTERNATIONAL Clay Machinery Co. has moved to Erie, Pennsylvania. Now a part of ERIE ENGINE & MFG. CO., INTERNATIONAL'S expansion program will provide even greater service through ERIE ENGINE'S automated production equipment.

Co-operation between buyers, suppliers, and an international network of representatives helped the Industrial Car Division to move to Erie with a minimum of delay in production schedules and "on-time" shipments.

Contact the ERIE ENGINE & MFG. CO. now, where expanded engineering, manufacturing, and service facilities are turning out a full line of INDUSTRIAL cars, KILN cars, CHARGING cars, and INGOT cars.

DISTRICT OFFICES IN PRINCIPAL CITIES

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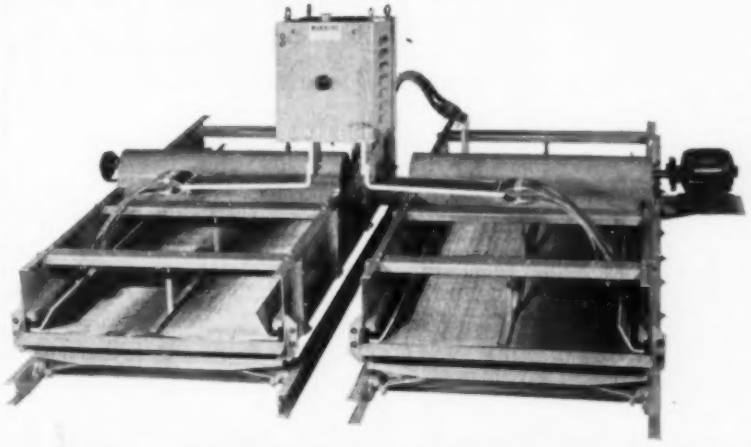

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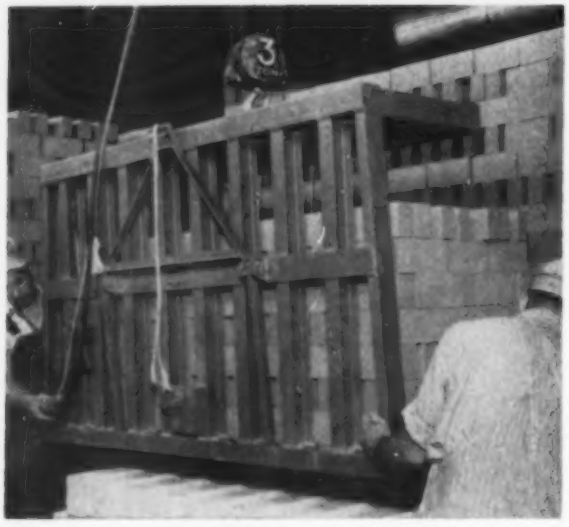

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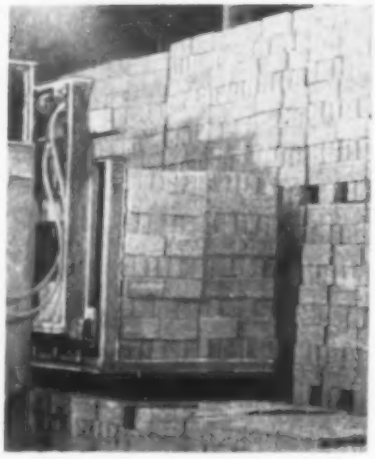

Forks with flap grippers for cored and solid brick. Give service . . . take the hard work out of brick handling. Write today for more information.

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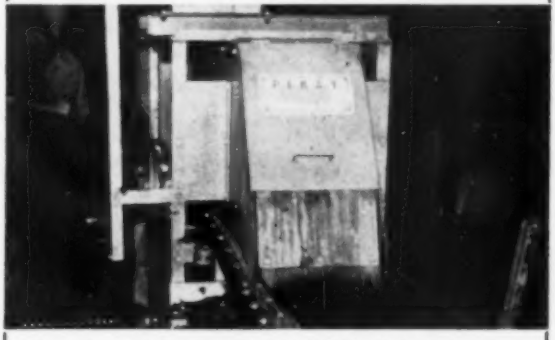
For the best *blending* and *mixing* at the lowest cost, investigate Pekay before you buy.



Easy to install. Can be installed right into your present conveyor system.

Pekay Mixer-Mullers are designed to reduce segregation and balling and insures uniform mixing. Help improve fired ware appearances and reduce losses. Mixer-Muller can be used with your present mixers to increase production. Can handle 300 tons of granular material per hour.

P-K

PEKAY MACHINE & ENGINEERING CO., INC.
865 N. Sangamon St.
Chicago 22, Ill.

Standard Brick Company Invests $45,000 In 5 New Dryer Rooms

Completion of five new recirculated-air dryer rooms for sewer pipe construction was the first step forward in an overall modernization program completed at Standard Brick Company, Pueblo, Colo.

Established in 1890, Standard Brick Company, despite its name has specialized in sewer pipe, and two types of fire brick ever since, with the emphasis heavily on sewer pipe. Until the decision was made to triple production of sewer pipe to meet heavy demands in the area, all sewer pipe was merely dried by convection in a 150 by 350 foot galvanized metal building, the heat provided by overhead gas-fired blower units. This, as might be expected was only barely satisfactory in an "average market" and now, with heavy demand for sewer pipe throughout the entire central and southern Colorado area, entirely inadequate. As a result, contracts were set up for five specialized dryers, designed by Dwight Hendricks, consulting engineer.

Built under supervision of Robert Breitweiser, who spent five years with the Denver Fire Clay Company before taking over as plant manager at Standard Brick Company, and John McFarlane, general manager, the five dryers have been built in what once was merely open-bay space on the right side of the original sewer-pipe building. The chambers are built of brick throughout with a galvanized metal ceiling and are 107 feet deep by 16 feet wide. Each is designed for maximum efficiency in fork-lift loading, following an unusual arrangement which will provide for swift loading and unloading while the circulation of heated air is expected to speed up drying to the point that sewer pipe production will be increased to 2,000 tons per month. Another four dryer rooms are planned for another bay on the opposite side of the original plant which will readily double this number.

The outstanding feature of the drying rooms, as pictured, is the use of steel frames, which let down from each side wall of the dryer rooms, to form a "temporary base" for pallets of sewer pipe under drying. There are 54 such steel frames in each of the dryer rooms, hinged on a hip-high shelf, which extends along the bottom of the wall at either side. The steel frames, when dropped from their erect position along the wall, meet snugly in the center of the drying room and alternate frames on either side are provided with gravity-operated, drop-legs which form a secure, strong brace, in the center of the platform.

Each pair of the frames is designed, when locked in position, to accommodate three 63 by 48 inch wooden pallets, one set at either side

Continued on page 138

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Continued from page 137

next to the wall and the center pallet bridging across the joint where the two frames intersect. Capacity on pallets is 12 eight inch sections of sewer pipe, more or less according to diameter.

Drying time under this principle, will range from 32 to 72 hours, according to humidity, according to Mr. Breitweiser, at least three times faster than the convection system on which the plant had relied for many years.

The application of hot air follows an unusual design. The five rooms have been equipped for natural gas heating, with an oil standby system, and there are three blowers installed sharing a common combustion chamber. There are two blowers connected with 25 horse power electric motors and another with a single 15 horse power motor. The smaller blower serves the number five drying room; the first 25 horse power unit, number three and four rooms; and the remaining 25 horse power unit, number one and two.

One blower is located at the south end of the five new drying rooms, the other two at the north end. Heated air from each is transported by means of a 20-gage, galvanized steel overhead duct, to "come-down" vertical ducts in the wall at each side of the drying rooms, half way down the length. Each "come-down" feeds its column of heated air into 50 outlets along the concrete floor of the dryer room on either side. As shown, the openings are spaced on two foot centers to provide for even circulation down the entire length of the dryer.

A single stack in the galvanized steel ceiling of each of the dryer rooms includes an exhaust vent while there is a fresh air intake unit at the blower. Both the exhaust vent and the cold air input duct are dampered, for relatively precise control of humidity. All of the heated air entering into each dry room through the overhead and come-down channels will be recirculated with a percentage of cold outside air motored into the flow, depending upon humidity and temperature.

Loading of the frames and pallets is a two-man operation, one man operating the lift truck and the other walking along the hip-height cat walk extending out from the wall on either side, letting down the frames securing them in place as each successive brace of frames is loaded. Thus, the fork lift loads three pallets on the last two frames and returns for additional pallets while the second set of frames is loaded in place, and so forth down the length of the tunnel until the 81 pallets are in place. A vertically-sliding, galvanized metal door provides access into the dryer rooms.

Firing of the Colorado plant's sewer output is carried out in 22 beehive kilns, all of which can be loaded directly from the same pallets used in the drying operation.

In addition to this comprehensive improvement in sewer pipe drying methods, Standard Brick Company is introducing modifications in production of standard and silicon fire brick. Later plans call for the addition of a continuous tunnel kiln for sewer pipe firing.

In the plant proper, a new horizontal sewer pipe machine was installed to supplement the output of the present vertical unit.

Construction of the dryer rooms was handled by general contractor Floyd Gray, while all brick was furnished by Summit Press Brick.

Tufhorse KANT-RIP GLOVES HAND PADS MITTENS

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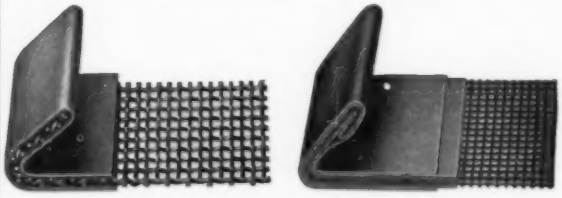

Screen sections of Tyler Woven Wire are fabricated for all makes of vibrating screens in any mesh or metal. They are made up with hook-strip or bent-edge construction to suit the machine on which they are to be used.

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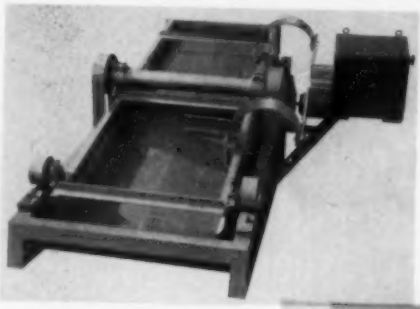

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Continued from page 137

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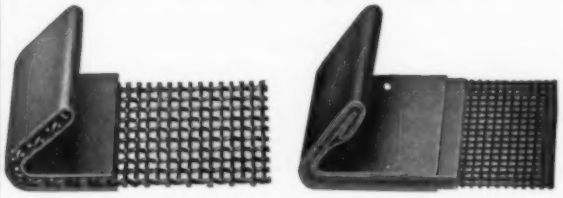

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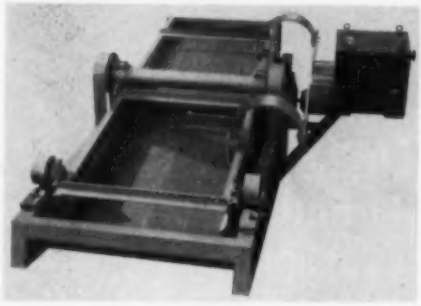

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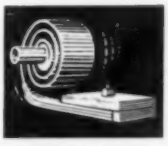

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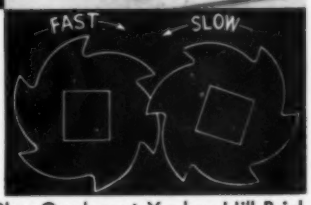

Users say it is the most effective and economical equipment for preliminary clay crushing. Slow turning hooked tooth roll feeds in lumps—fast turning roll quickly breaks lumps. Unit shown is an Eagle Senior Clay Crusher at Yankee Hill Brick Mfg. Co., Lincoln, Nebraska. Material fed by apron feeder in this case—carried to storage by belt conveyor. Send for Bulletin 952.

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100% AUTOMATIC MOISTURE CONTROL

EMC 703

In Your Pug Mill or Batch Mixer.

Over 90% of major West Coast Heavy Clay Products Plants are now using one or more EMC-703 Moisture Controls

Automatically holds desired moisture content; insures against product size variation; removes human error.

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Foote Chromite, when added to buff burning clays, produces highly attractive bluish gray shades that match closely the many shades of natural limestone. Additions of this natural chrome ore in quantities as small as ¾ to 1% produce appreciable coloring values at moderate firing temperatures. Screen analysis of Foote air-floated Chromite is rigidly held to assure uniformity of tone and color development.

Write for complete details on Chromite, Ebony Manganese Ore, Petalite, and Foote's many other ceramic materials.

FOOTE MINERAL COMPANY
442 West Chelten Building
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CLASSIFIED ADVERTISEMENTS

Limited to Want Ads, Consulting Engineers, or Used Equipment ads, (wanted or For Sale)

TRANSIENT WORD ADS: 12c per word for each insertion.

Headings such as "Wanted", "For Sale", etc. and address to be counted as part of the ad. Minimum charge $2.00 each insertion.

POSITION WANTED ADS: $1.50 for 25 words or less; each add'l word 10c.

FOR USE OF BLIND ADDRESS: (Care of BRICK & CLAY RECORD) count as 15 words to cover cost of handling and forwarding replies.

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$15.00 per inch. On advance orders for twelve consecutive issues, 12.00 per inch per insertion. (No retroactive adjustment).

An inch is measured vertically on one column, 2¼" wide; three columns on a page. For a two-column advertisement add together height in each column.

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Add 25% to above rates for Reverse Plate (white lettering on black background).

All rates based on payment in advance except on regular contract.

No Agency Commission or Cash Discount

BRICK and CLAY RECORD

5 South Wabash Avenue, Chicago 3

WANTED—HELP

OPPORTUNITY
SALES ENGINEER

The way is straight up in Sales and Management with a First-line manufacturer of well-designed, well-built machinery for structural clay products and refractories. Chambers needs a new man for Mid-West sales and service coverage. Must have practical knowledge of industry. Engineering degree prefered but not required. Compensation tailored to experience, business-building potential and needs. Commission, expenses paid, and fringe benefits.

Chambers Brothers Company
52nd & Media Sts., Phila. 31, Pa.

Improve your Latin-American sales. American resident in Mexico with sales and ceramic experience, presently employed selling to industry seeks new position. Write Brick & Clay Record Box No. XAT.

SWINDELL-DRESSLER CORPORATION
Engineers—Manufacturers
—OFFERS—

Opportunities in Kiln & Dryer development, design and erection for Ceramic, Civil, Mechanical, and Combustion Engineers. Basic experience necessary; however, training available to engineers who are ambitious and interested in future advancement. Main Office in the Pittsburgh area.
Please submit in confidence your resume of education and experience to:

Swindell-Dressler Corporation
Personnel Department
P.O. Box 1888
Pittsburgh 30, Penna.

Manager of refractory or building brick plant. Graduate ceramic engineer experienced in research and development. Excellent record. Address Box EAR-13 Brick and Clay Record.

Retired Salesman Wanted for light duties in the South. Must know flue lining selling. This is more of an advisor position. Write Box 9-ZAR, care of Brick & Clay Record.

WANTED—HELP

REFRACTORY SALESMAN WANTED to sell refractories and specialties to foundries etc. Established supplier Los Angeles area, salary and bonus. Reply with education, age and experience. Address Box 11-SMR, care of BRICK AND CLAY RECORD.

POSITION WANTED

Top flight production man desires challenging position in heavy clay products or refractory industry. Experienced, capable, production minded and welcome responsibility. Expert in firing and labor relations. Write Box XAG care Brick & Clay Record.

POSITION WANTED—As temporary assignment by a graduate Ceramic and Mechanical Engineer with 20 years experience in plant design and lay out, raw material examination and investigation property mapping, drying, and combustion studies, crushing, grinding and classification, equipment specification, supervision of constructon and operation, new product development, operations research and statistics, material handling and packaging engineering. Will submit detailed qualifications and renumeration schedule on request. Address Box 5-WAU, care of Brick & Clay Record.

Young Ceramic Sales Engineer available after January 1. Age 32, presently employed, desires position of responsibility with reputable and progressive company. Experienced in all phases of heavy clay products manufacture from mining to sales of finished product with exceptional experience in design and operation of tunnel kilns. Promotional work in clay products industry desired, but will consider any challenging position, preferable in Sales. Will relocate. Salary range $9—10,000. Full information upon request. Box 11-VBC BRICK AND CLAY RECORD.

FOR SALE—USED EQUIPMENT

FOR SALE

KENNEDY 7' x 9' contin. ball mill, 150 HP—1948
ROTARY KILNS: 10' x 230', 11' x 155", 10' x 78', 8' x 125', 8' x 9" x 100', 7'6" x 100', 7'6" x 60', 6' x 7' x 100', 6" x 60', 3' x 24',
ROTARY DRYERS: 10' x 78', 8'8" x 70', 7' x 50', 6' x 50', 4'6" x 32', 3' x 15', 2' x 9',
HAMMERMILL: Penna. Crusher NON-CLOG, 400 HP UNUSED, 1952. #DNC-5060.
PUG MILLS: 36" x 14', 7" x 3'6", T347 SS.

PERRY EQUIPMENT CORP.
1432 N. 6th St., Phila. 22, Pa.
POplar 3-3505

LANSDALE BRICK PRODUCTS CO. LANSDALE, PA. SUSPENDING OPERATIONS OCTOBER 1, 1959. ALL BRICK MANUFACTURING EQUIPMENT FOR SALE:

1—Marion ⅝ Electric Shovel—440—3 phase—60 cycle
1—6 ton Brookville Gasoline Locomotive—36 gauge about 3000 feet of 30 lb. Rail Track.
4—1½ Yard Clay Dump Car.
1—Ledgerwood Electric Hoist
1—Clearfield—9 foot Heavy Duty Grinding Pan
1—Mecca 36 inch Apron Feeder
1—12 foot 5-A Steel Pug Mill
1—5-A Brick Machine
1—No. 18 Steel Brick Cutter—almost new
175—Dryer Cars—24 inch gauge 2800 feet of Dryer Track—20 lb. Rail
17—Electric Motors—Size from 1 H.P. to 100—440—3 phase—60 cycle
2—Kiln Cooling Fans
1—Coal Conveyor

Waste Heat Pipe—covering 6 Kilns—and many other Items—all in running order.

— FOR SALE —

1—Portable Gleason Clay Shredder with feed hopper and conveyor, discharge stacker, 440 volt motor. Bought new, used two months. A real bargain at half-price.

***Contact:* Jackson Ready-Mix Concrete**
P. O. Box 1292
Jackson, Mississippi

FOR SALE—USED EQUIPMENT

DE-AIRING PUG & AUGER COMBINATIONS—Fate, Root, Heath PR6 (6" auger)—J. C. STEELE #50 (15" auger)—Bonnot 18" auger

PUG MILLS—9' Freese, 10' J. C. Steele, 10' American Double Shaft—15' Granulators—Freese P16—Chambers P51

DRY PANS—7' American, 9' Bonnot—#418 American Rim Discharge (new '57) w/40 HP motos

SCREENS—3 x 5, 3 x 10, 4 x 10 Tyler Hummer—42" x 10' Cedar Rapids—5' x 12' (2 dk.) Robins—5' x 10' (3 dk.) Diester

ROLL CRUSHER—SMOOTH—30" x 16" f Chambers—32" x 18" f Steele DISINTEGRATING—12" f Steele—16" f Chambers #1—24" f Chambers—24" f American

SINGLE ROLL—18 x 36 McLanahan—24 x 24 Link Belt—18 x 42 Class B McLanahan

SPENCER PRESSURE BLOWERS—270 cfm/24 oz.—150/48—550/24—635/16—1300/16—1500/14—1900/24—2200/24

LAWLER COMPANY
Metuchen, N. J. **Liberty 9-0245**

RAILS AND DRYER CARS

250 Single Deck Dryer Cars
40 Triple Deck Dryer Cars
50 Rack Cars

All sections rails and track supplies.
New Wood Pallets made to your specifications.

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New York 17, N. Y.

105 Lake Street
Reno, Nevada

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Miami 32, Florida

FOR SALE

BRICK MACHINES—Combination & Deairing
PUG MILLS—Single & Double Shaft
GRANULATORS—Chambers 51 & Freese 16
CUTTERS—Steele 18, Freese C-25, Hand
DEAIRING—Steele #50 Bonnot, FRH Lab size
DRY PRESS—Boyd 4 mould Special
DRY PANS—4', 7', 9'
HAMMER MILLS—12x12, 24x12, 36x45
SMOOTH ROLLS—18x24, 16x30, 10x16, 30x36
DISINTEGRATORS—12", 18" & 24"
JAW CRUSHERS—24x13, 18x24, 48x60
SINGLE ROLL CRUSHER—
ROTARY DRYERS & KILNS—2x20, 3x30, 6x40,
LAB—8 x 5 Rolls, Hammer Mill, Pulverizer
5'x6' KENNEDY VAN SAUN BALL MILLS
HYDRAULIC CERAMIC PRESS—vertical
HAND TILE PRESS
MIXERS—Lancaster EAG 3 & 4, Clearfield #610, Simpson #3, Blystone
SCREENS—3x5, 3x10, 4x10, Slip Lawns
FANS, PRESSURE BLOWERS—Many Sizes
FEEDERS—Disc Apron, Reciprocating, Even
HARDINGE CONICAL MILLS—3', 4½', 6', 7', 10'
RECORDING PYROMETER
PEBBLE MILLS—Various Sizes

List your spare equipment with us.

ROBERT L. CLARE
212 Rector St. Perth Amboy, N. J.
Phone Hillcrest 2-0061

FOR SALE

Used dry pans, grinders, crushers, clay working equipment, rebuilt by original manufacturer.

The Toronto Foundry & Machine Co.
TORONTO, OHIO **LEhigh 7-1563**

FOR SALE

PRODUCT LINE OF

Extruders & Pug Mills

An unusual opportunity exists to acquire a complete line of Extruders and Pug Mills due to expansion of interests in other fields. All drawings, patents, tools, dies, fixtures, etc., and inventory of replacement parts included. Present sales approximately $200,000.00 per year. For complete details write Box 10-ZAO.

Side Dump Cars: 12#—1¼, 2, 3 and 12 Yards
Gasoline Locomotives: 4, 6, 8 and 14 tons
Diesel Locomotives: 6, 10, 25, 45, 65 and 80 tons
Smooth Roll Crushers: J. C. Steele 12" and 16"
Automatic Cutter: Freese Model C-25
Rotary Dryers & Kilns: 4'x20', 5'x30', 5'6"x50', 80"x60', 6'x120', 7'x180', 8'x125', 10'x200'

WANTED—Air Compressors—Dryers—Locomotives

R. C. STANHOPE, INC.
603 42nd St. New York 17, N. Y.

FIRST CLASS EQUIPMENT FROM YOUR FIRST SOURCE!

Pebble and Ball Mills—standard makes up to 8'x8'
Crushers & Hammer Mills
Lancaster & Simpson Muller Type Mixers all sizes stocked
Rotary Dryers and Kilns to 155'
Sifters and Screens; all sizes
Filter Press to 54"—Filters
Tablet Presses by Kux, Stokes, Colton; excellent selection
SEND FOR "FIRST FACTS"
Complete Illustrated Inventory

FIRST MACHINERY CORP.
209-289 Tenth St. Bklyn. 15, N.Y.
STerling 8-4672

FOR SALE

PULLEYS of various sizes, face and bores.
ELECTRIC MOTORS, various H.P. and speeds.
BREWER Heavy Duty Conical Roll Crusher.
STEELE No. 5 Hoisting Drum for pulling up cars.
KILN COOLING FANS, 48 and 24", Motor Driven Propellers.

GRANT BRICK WORKS
Weldon, N. C.

BRICK MACHINES—2 Martin 46" Auto Brick Machines—Complete
OVERHEAD CRANE—5 Ton P&H Overhead Gantry Crane with 2 Motor and Generator Sets
GRANULATORS—1 Chambers Bros. 1 Lancaster Big Boy
RAIL—13,000 ft. 60#
10,900 ft. 45#
900 ft. 30#
LOCOMOTIVES—Gasoline—30" gauge 6 ton Whitcomb and 36" gauge 7 ton Plymouth
CLAY CARS—12—30" gauge 1¼ yd—side dump
11—36" gauge 2 yd—side dump
Many other items, including boilers, pumps, blowers, magnesium pallets, electrical equipment.

East Kingston Brick Co., Inc.
95 River St., Hoboken, N. J.
Oldfield 6-7900

FOR SALE—USED EQUIPMENT

FOR SALE

KENNEDY 7' x 9' contin. ball mill, 150 HP—1948
ROTARY KILNS: 11' x 155', 8' x 125', 8' x 9' x 100', 7'6" x 100', 7'6" x 60', 6' x 60', 3' x 24'.
ROTARY DRYERS: 8'8" x 70', 7' x 50', 6' x 50', 4'8" x 32', 3' x 15', 2' x 9'.
HAMMERMILL: Penna. Crusher NON-CLOG, 400 HP UNUSED, 1952, #DNC-5060.
PUG MILLS: 30" x 14', 7" x 3'6", T347 SS.

PERRY EQUIPMENT CO.
1432 N. 6th St., Phila. 22, Pa.
POplar 3-3505

TUNNEL KILNS: 4 with cars 123' to 150' long. Circular kiln 70' diax 189' long
BRICK MACHINES: (deaired) FRH Jr & Sr. Steele #30 & 40B. Amer 290. Bonnot 22,497 & Greyhound. Non-deaired: Steele #1, #2, #5A. Ray, Freese GH, & Chambers Royal.
1—3 yd DRAG SCRAPERS. LOADERS
Boyd 4 mold, Gates 2 mold DRY PRESSES
Steele #18, Chambers 22 & Bensing CUTTERS
4, 6, 7, 8 & 9' DRY PANS. 8' WET PAN.
MILLS: 7, 10, 11 & 12' PUG. 2424 Dixie non-clog, 3650 std. Hammer, Raymond 50 47 Roll.
CONVEYORS: all lengths Troughing & Roller.
DRYERS: 3x30, 4x25, 7½x70, 8x70, 10x78
125 Kiln, 270 Dryer, 400 Rack CARS.

MID-CONTINENT EQUIPMENT CO. INC.
8321 Gannon—Wydown 1-2826—St. Louis 32, Mo.

FOR SALE

ONE ROTARY COOLER, 5'6" x 60', ½" Plate, "Z" Bar Lifters on front 40'. Complete with Reeves Varispeed motor drive and 10-h.p. motor. Excellent Condition—Used One Year

Hydraulic Press Brick Company
Brooklyn, Indiana—Phone 26

FOR SALE

DRYER CARS—200 pallet cars with rolled edge pallets 32" x 10'.
HOIST—Ledgerwood single drum, Electric Model 2712.
SIDE DUMP CARS. 4 Easton 2 yd. v, 36" gauge.
GASOLINE LOCOMOTIVE—1—Brookville, 4 ton, 36" gauge.
RAIL—3000' 30 lb. rail with splice bars.
CRUSHER—1—McLanahan 18" x 24", renewable teeth.
BUCKET ELEVATORS. 1—56' high, steel casing. 16" x 8" buckets.
1—20' high steel casing. 12" x 6" buckets.
DISC FEEDER—Bonnot 60"
MIXERS—Simpson & Clearfield.
Plants bought & sold.

HERMAN A. HALL 118 Park Road
Phone FRanklin 24310 Wyomissing, Pa.

FALL BARGAINS

DE-AIRING MACHINES. #30 JC Steel FRH #6WJ6, Bonnot Combination, Chambers #9C, American 404-A, International #470, International Falcon.
CUTTER, Steele #18, Model BLH, Freese C-25, and C-20.
ROLLS, Disintegrating, Steele 24 x 24, 12 x 24, smooth roll 18 x 24.
DRY PAN, 9' Stevens, 9' Bonnot.
SCREENS, Tyler Hummer, Cedar Rapids, Sturtevant.
DRYERS, Rotary. Various sizes from 2x30 to 8 x 175.

FERNHOLTZ MACHINERY CO.
8468 B Melrose Place
Los Angeles 46, California

FOR SALE

Used Gleason Shredder
Good Condition
Ready to Operate

Tri-State Brick & Tile Co., Inc.
P. O. Box 9787 Jackson, Miss.
EMerson 6-6485

WANTED—USED EQUIPMENT

Wanted—Used Equipment. Will buy used 12' to 15' open type pug-mill and Steele #18 right hand brick-cutter. Need good used gas burners for periodic kilns. THE GALENA SHALE TILE & BRICK CO. GALENA, OHIO.

WANTED—USED EQUIPMENT

I will buy a F-R-H Hummer De-Airing or any other make of machine of approximately the same size. Write Box 10-WZZ, care of BRICK & CLAY RECORD.

FOR SALE—PLANT

FOR SALE—BRICK plant, in operating condition in New Mexico. Best shale deposit in state. Owner wishes to retire. Address Box 11-QBH, care of BRICK & CLAY RECORD.

FOR SALE—BUSINESS

For Sale

Brik-Stik and Super Composition business for Brick Display Panel assembling. Have served Brick Industry for forty years. Write Box ZAA care of BRICK & CLAY RECORD.

MISCELLANEOUS

100 Tons 30# ASCE Rails practically new, never used as rail. Complete with accessories. Low price. **M. K. FRANK**
Grand Central Palace, New York
401 Park Bldg., Pittsburgh, Pa.
105 Lake Street, Reno, Nevada
1209 Metropolitan Bank Bldg., Miami, Fla.

For Sale—Lower Kittanning buff burning plastic Fireclay.
Mine run, crushed, or ground. Consolidated Clay Mines Negley, Ohio.

T. W. GARVE, P.E.
69 W. Weisheimer Rd.
Columbus 14, Ohio
Engineering Service. Clay Testing

DRYERS & KILNS TO FIT

We have designed every type of kiln for every kind of fuel and ware, TO FIT.

Forrest A. Paschal
Phone Sherwood 2-2749 & 2-2500
P. O. Box 289 Siler City, N.C.

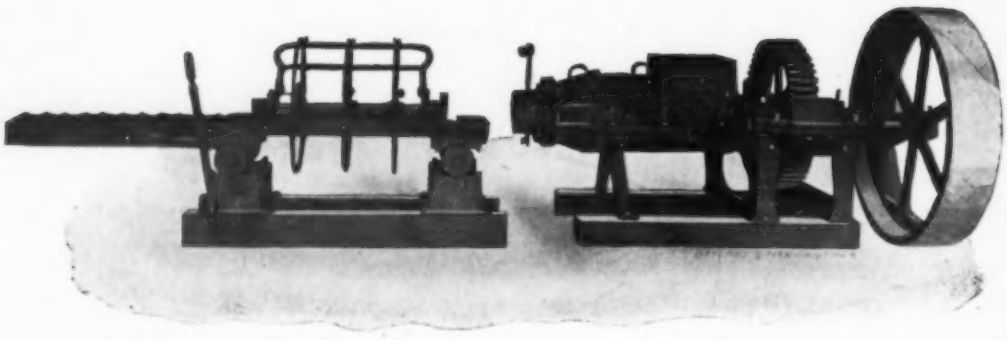
Representing:

Huber Warco	Deister Concentrator
Robinson Ventilating	Engineering Associates
Lippmann Engr. Wks.	Manufacturers Equip.
Southern Fabricating	

FOR SALE—BUFF BURNING FIRE CLAY, lump or ground. Ask for prices at mine or delivered via truck or railway. Boos & Co., Macomb, Illinois.

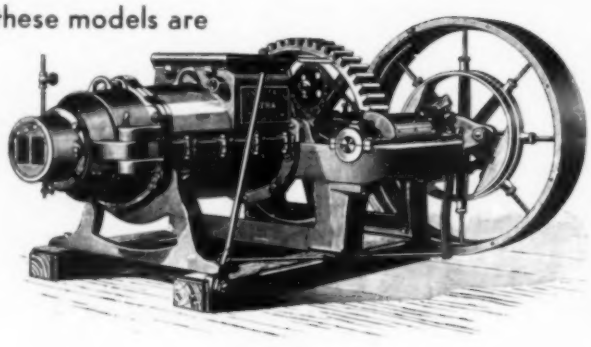
F. J. FORD
Representative—Engineer
Clay Working Machinery
Car Tunnel Kilns—Dryers
P.O. Box 537 Dallas, Texas
P.O. Box 385 San Francisco, California

70 YEARS AGO!
50 YEARS AGO!
25 YEARS AGO!



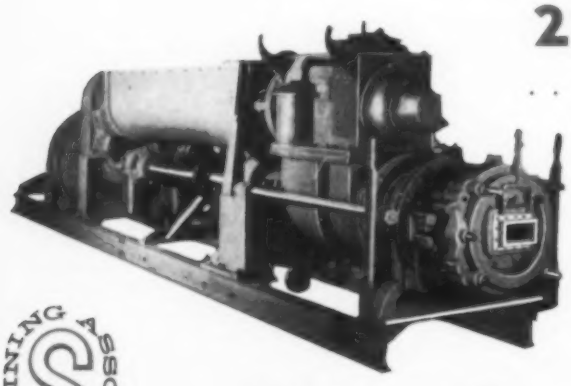
70 Years Ago

. . . this Steele No. 1 Extrusion Machine and No. 1 Hand Cutter were leaders in their fields. **Both of these models are still being manufactured and used.**



50 Years Ago

. . . this Xtra Extrusion Machine was the last word in clay working machinery.



25 Years Ago

. . . when SCPI was organized, this Steele No. 60 Combined Deairing Machine was on the drawing boards. Every No. 60 built is still in operation today.

70 - 50 - 25 years ago . . . and today, the name Steele has been synonymous with the finest in Clay Working Machinery.

SUSTAINING ASSOCIATE SCPI

J. C. Steele & SONS Statesville, N. C.

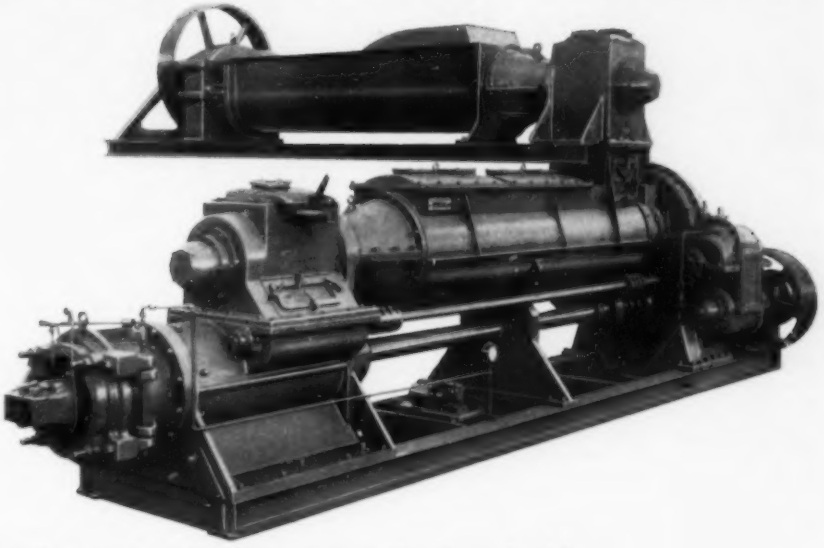
Pacific Agents: Walter C. Stoll, 5028 Alhambra Ave., Los Angeles 32, Calif.

THE BEST IN CLAY MACHINERY SINCE 1889

Today

A Tremendous Step Forward

The Steele 60FV Vacuum Pug Sealing and Vacuum Extrusion Machine



Today

this mighty giant provides the most extensive preparation imaginable.

The No. 60-FV Vacuum Pug Sealing and Vacuum Extrusion Machine, provides **eleven feet** of totally enclosed vacuum pugging in its 30" diameter closed pug mill. This is in addition to the 11' 6" of open pugging in the 30" width pug tub of the No. 50-F Pug Sealer which is shown feeding the 60-FV machine.

The 60-FV also provides an additional compression and shredding of the clay. So the 60-FV - 50-F installation pugs the material twice (once under vacuum), compresses and shreds the clay twice, and extrudes under vacuum. It thus provides the most intensive preparation imaginable.

The 60-FV is a Separate Drive machine of the combined type. Its vacuum pug-sealer and its vacuum extruder are separately powered and controlled. The 50-F Pug Sealer, of course, has its own drive. The three independent drives provide the ultimate in control. The danger of overfilling the vacuum chamber and/or the vacuum pug mill is thus eliminated. The three drives can safely handle over four hundred horsepower.

Low plastic materials, granular materials, extremely hard shales, and blends of materials requiring thorough mixing are all greatly benefitted by vacuum pugging. **STEELE** vacuum pugging equipment is operating successfully in scores of installations. No user of **STEELE** vacuum pugging equipment has subsequently installed equipment without vacuum pugging.

Write us for complete information.

SUSTAINING ASSOCIATE

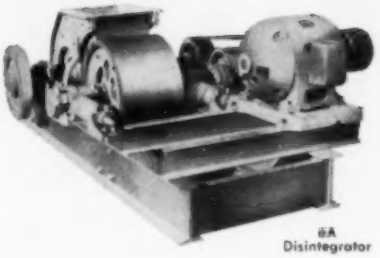
J. C. Steele & SONS Statesville, N. C.

Pacific Agents: Walter C. Stoll, 5028 Alhambra Ave., Los Angeles 32, Calif.

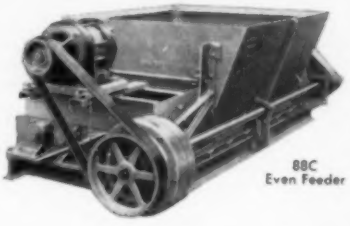
SCPI **THE BEST IN CLAY MACHINERY SINCE 1889**

Steele Clay Machinery

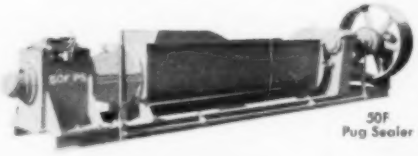
. . . is practical, rugged, economical



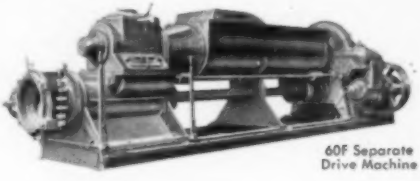
6A Disintegrator



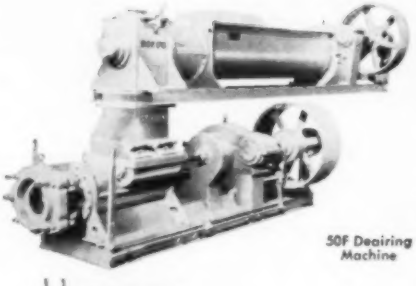
88C Even Feeder



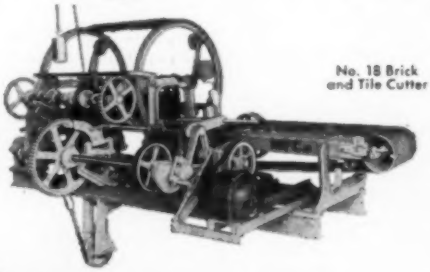
50F Pug Sealer



60F Separate Drive Machine



50F Deairing Machine



No. 18 Brick and Tile Cutter

Crushers and Disintegrators

Steele produces a wide variety of equipment for reducing materials of many types. Shown is the Steele 6A Disintegrator designed for reducing moist clays **or** for primary reduction of harder materials to a fineness of ½" or less.

Feeders

Designed to uniformly feed many types of materials without choking, arching, or bridging. Shown here is the No. 88C. Also available is the smaller 44C model, and the larger Double-88.

Pugmills and Pug Sealers

Eight Standard Models from which to choose — from Open End Pugmills to Double Vacuum Pug Sealers. They produce finer textures, reduce lamination and greatly increase plasticity. Shown is the 50F Pug Sealer.

Pugging and Deairing Extrusion Machines

Made in six sizes, with capacities from 2,000 to over 20,000 brick/hr. Shown is the 60F, which is a separate drive machine. Three combined drive models and two other separate drive models are in regular production. The No. 50F Separate Drive is shown here. Pug Sealer can be mounted to any angle to the Extruder. All larger models can be built with vacuum pugging in addition to open pugging.

Brick and Tile Cutter

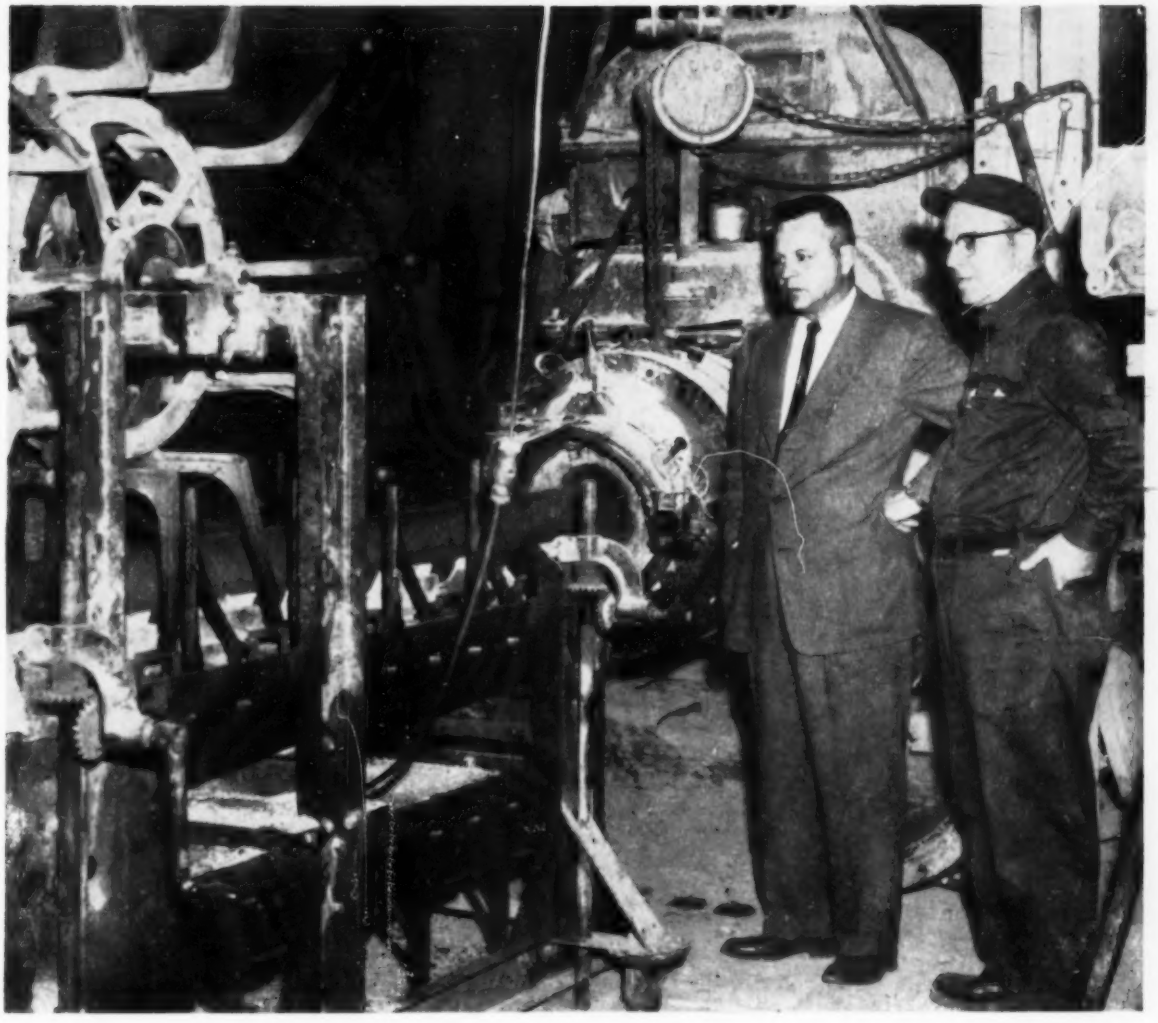
The undisputed leader in its field. Ten types of easily interchangeable cutting reels enable it to cut any type of brick or tile.

SUSTAINING ASSOCIATE SCPI

J. C. Steele & SONS Statesville, N. C.

Pacific Agents: Walter C. Stoll, 5028 Alhambra Ave., Los Angeles 32, Calif.

THE BEST IN CLAY MACHINERY SINCE 1889



"F-R-H De-airing Extrusion machine Increases Brick and Tile Production 20%"

Reports Rockford Brick & Tile Co., Rockford, Iowa

Rockford Brick & Tile Co., Rockford, Iowa produces high quality brick, drain tile, and hollow building tile. Drain tile production is 125 tons per day. A user of F-R-H Ceramic Machinery for more than 40 years, the company reports a 20% *increase in production with current F-R-H equipment.*

Present equipment includes an F-R-H Model WJ—Type 12 De-airing Extrusion machine and an F-R-H Model 2BT Tile Cutting Unit. The firm's compact De-airing Extrusion equipment features *double pug shafts* for highest pugging efficiency, eliminates many product variables to keep rejects to a minimum.

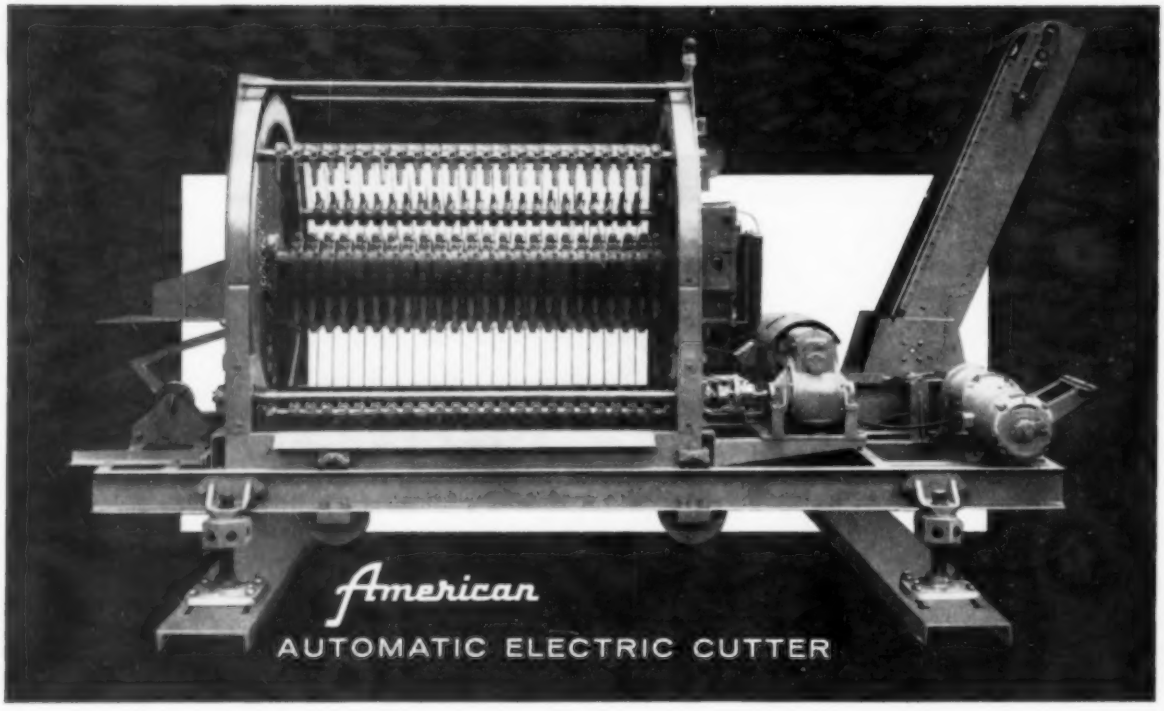
Replacement of parts is accomplished with minimum down-time and without disturbing the permanent seal of the vacuum chamber. Find out how F-R-H Ceramic Machinery can improve *your profit picture.* Send a brief outline of your plant operations to The Fate-Root-Heath Company, Dept. B-1, Plymouth, Ohio.

F-R-H

CERAMIC MACHINERY

FOR 100% OPERATING EFFICIENCY—ORDER GENUINE F-R-H REPLACEMENT PARTS DIRECTLY FROM THE FACTORY

BIG CAPACITY BRICK PRODUCTION



CUTS UP TO 18,000 BRICKS PER HOUR

Every motion of the "American" No. 858 Automatic Electric Cutter is electrically controlled to give precision accuracy of any brick or tile cut up to 14"x14". This electric control is unfailing . . . there is no chance for error.

The "American" No. 858 is a complete unit . . . there are no extras to buy. Wire holders and platens are adjusted easily for any size requirement, and the base adjusts up or down to suit any cross section of clay. The hourly capacity of the "American" No. 858 Electric Cutter is from 3,000 to 18,000 bricks . . . 23 standard bricks per cut. This is truly the best cutter for "SCR" brick. Other features include: anti-friction bearings throughout . . . magnetic clay bar clamp for perfect cut . . . hinged measuring frame can be lifted to permit die or front change . . . no valves or gears.

Investigate the advantages of the modern, fully automatic "American" No. 858 Electric Cutter . . . it's designed to give you efficient, dependable service for years.

American CLAY MACHINERY

A Division of HUBER-WARCO COMPANY
Marion, Ohio, U.S.A.

Plants in Marion and Bucyrus, Ohio
Cable Address: HUBARCO

OVER A CENTURY OF EXPERIENCE IN THE MANUFACTURE OF CLAY MACHINERY